WORKFORCE + RESEARCH + EDUCATION RESTORE SUBCOMMITTEE

This is the portal list of projects tied to Workforce+Research+Education related projects.

Columns H-P you will note all of the respective sub-committee subjects. These represent check boxes in the portal project application process that an individual submitter may select.

Column H and M (the RED + ORANGE column) represents Workforce and Research and Education.

Workforce tab represents all portal projects that checked the Workforce box.

Education tab represents all portal projects that checked the Research and Education box.

Workforce+Res+Education_PARED represents a paired down or filtered list of portal projects.

Three classes of filter were placed on the FULL list:

1) projects already funded, going to be implemented, and/or vetted to be not feasible through earlier screening and vetting processes (LIGHT GRAY FILLED)

2) projects mischaracterized or misrepresented - i.e., shouldn't be considered under this respective sub-committee's charge (LIGHT ORANGE)

3) program like projects that are captured under broad program goals like Water Quality, Land Acquisition, and Beneficial Use, or too broad to be implemented as written (LIGHT GREEN)

No project has the “who” submitted the project identified.

MDEQ does not vet portal projects AT ALL. If a submitter says it costs $1M we assume it does. We only vet a project once is identified as a potential for funding.

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	WORK FORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_ACT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Workforce Development	22	10/19/2013	PVRV Resorts	Solar-Powered RV Resorts described in attachment. Build PV carports high enough to park motorhomes, trailers and even mobile homes in the shade. The idea is to make money from thesun and from renting recreation spaces in the shade. Same concept could be used for more permanent housing for senior citizens living in disaster resistant modular housing.	Hancock Harrison,	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 1.00	$ -	
	Workforce Development	47	10/23/2013	Linear Park on Beach Boulevard	The concept is to engage leading landscape architecture firms to establish a master plan to transition the Mississippi Gulf Coast's 26-mile man-made beach into a flourishing linear park along the Gulf of Mexico. A linear park that will be a touted haven for tourist, significantly enhance the Gulf Coast environmentally and provide the state of Mississippi with a preeminent eco-tourism destination. Linear Park on Beach Boulevard perfectly complements the region's tourism landscape. Perhaps more importantly, the Mississippi Gulf Coast will see a transformation from a "budget beach" to a transcendent park nestled between scenic Beach Boulevard and the Gulf of Mexico - a truly unique and premier landing-place developed with the environment, tourism and storm preparedness in mind.	Harrison	Yes	Yes	No		Yes	Yes	No	No	Yes		$ 100,000.00	$ -	
	Workforce Development	53	10/24/2013	Seafood Receiving,Processing, and Distribution Dock	The proposed location for this Working Waterfront Seafood Receiving, Processing, and Distribution Dock is the site of the former Gulf City Fisheries which is located on the east side of the Pascagoula River just north of the Highway 90 bridge. This facility will provide a one-stop, short-term and long term mooring, unloading, ice and fuel service as well as value added processing which occurred at this location from the the late 1950's to the 1990's. This is a sincere effort to revitalize the local commercial fishing fleet which has been at-risk since Hurricane Katrina and further negatively impacted by the BP oil spill. A thorough hard copy of this proposed project has been forwarded to MDEQ Director Ms. Trudy Fisher. Thank you, Bruce W. Maahan	Jackson	Yes	Yes	Yes		Yes	No	Yes	Yes	Yes		$ 4,881,792.00	$ -	
	Workforce Development	89	10/29/2013	Gulf Coast Prescribed Fire Cooperative	Thousands of acres of private and public longleaf pine forests, savannas and coastal marshes within the three coastal counties are in need of management activities including prescribed burning and exotic plant control to restore habitats of native wildlife and plants and also to increase values of privately-owned forest lands for recreational use and forest products. This program will establish an organization of professional fire practitioners to apply fire as a science based management tool on private and public wildlands adjacent to or in close proximity to established core conservation areas. All burn teams will be trained to National Wildfire Coordinating Group (NWCG) standards. Each team includes the following staffing and equipment: type-2 prescribed fire burn boss; type-3 tractor plow or tracked engine with operator, one type-6 engine with engine boss and three type-1 firefighters. Based on funding, a maximum of three teams will be established. Teams may work independently or in conjunction with each other or with established fire crews from local, state and federal agencies to apply prescribed fire on approved public and private lands. Team members will be available to make presentations concerning the benefits of prescribed fire to school and civic groups and to provide fire management training to local landowners and firefighters. When not engaged with prescribed fire-related activity, teams will engage with other land management needs: monitoring results of prescribed fire projects; conducting fuel reduction and invasive species control; monitoring, mapping and maintaining public access and nature trails; and prescribed fire education projects. Teams will be supervised by a Field Coordinator (professional fire manager) who will oversee safety, training, work assignments, planning and coordinating with local partners and cooperators.	Hancock Harrison,	Yes	Yes	No		Yes	Yes	No	No	Yes		$ 25,120,000.00	$ -	
	Workforce Development	94	1/1/1900	Bayou Grand Shoreline Stabilization	The subject property is one of the last remaining contiguous tracts of land along the Mississippi's Gulf Coast of it's size. Since the oil spill in 2010, nearby residents have noticed a big decrease in vegetation, marine life, wildlife and other resources predominant throughout the property before the spill. The loss of marsh land has been proven to magnify erosion by a significant amount. The land is well positioned to become a large scale multi-use development that could provide much needed amenities to the area including boat ramps, boardwalks, piers, bike paths and other economic drivers. At the same time, our intention is to keep a large portion of the land in it's natural state and not disrupt the natural ecosystem of birds, wildlife and vegetation. The current height requirements for building on the land range from 16-18 foot above sea level. Given these minimum height requirements, most options for the land are not feasible due to capital required to abide by these mandates. Ideally, we would like to form public/private partnerships in which everyone benefits from the reshaping of the land through infrastructure improvements (water, roads, etc.) and shoreline and marsh restoration. If these costs are not substantiated, it would be in the best interests for the allocation be set aside to purchase the land for government use. With it's close proximity to Gulf Islands National Seashore, the property would be ideal for a multitude of uses including public access, recreation, outreach, research & education and economic development.	Jackson	Yes	Yes	Yes	20	Yes	No	Yes	No	Yes		$ 7,350,000.00	$ -	
	Workforce Development	96	10/31/2013	Pass Christian - East Harbor Expansion Improvements/Enhancements	The City of Pass Christian is currently constructing a harbor that is funded via CDBG (economic development - must create 50 jobs in 3 years), CIAP grant and BP block grant. The 22+ acre harbor basin, dredged to 10 ft. depth, includes 164 recreational and commercial boat slips, 96 truck/trailer parking slips, 215 automobile parking slips, 4 tractor/trailer slips, 4 publicly accessed boat ramps, landscaping, water/sewer and electrical infrastructure and 2 public restroom facilities. An elevated access structure along the east breakwater perimeter allows public access for fishing and will serve as base of operations for commercial seafood operations. Additional items include signage denoting protected and endangered species and public information regarding invasive aquatic species and how to prevent spreading. The design includes approximately 240 recreational and commercial slips but approximately 75 slips were bid as alternates due to funding constraints. Additional items designed and bid as alternates are a splash pad/spray park, pier for commercial operations related to shrimp off-loading, additional public restrooms and improvements to existing harbor area serving commercial operations. Additional items to consider funding include public laundry facilities for transient boaters and handrails along southwest breakwater that will allow public access. The project is designed to meet clean marina program criteria. Construction completion at 10/31/13 is approximately 50%.	Harrison	Yes	No	Yes		Yes	Yes	Yes	No	Yes	commerci	$ 3,500,000.00	$ -	
	Workforce Development	1164	7/8/2013	D'Iberville Working Waterfront & Commercial Seafood Harbor	(ORIGINAL ID#12018) 1) The idea of a working waterfront for the seafood industry in D?Iberville is not new. In fact, the City has tried for over 20 years to raise sufficient money to expand the current harbor limited to the space underneath the I-110 Bridge. The City has tried to negotiate leases with bay front property owners to no avail. The City has prepared several plans over the years to construct a working waterfront harbor but funds to acquire shoreline properties have not been available. The commercial harbor is part of the overall plan to revitalize the downtown one block north linked with the French Market one block north. The City has Tidelands funds that would be leveraged to effectuate land purchases and then on to construction of the harbor. The attached summary provides an overview of the project and how well it fits the Seafood Industry portion of the GoCoast 2020 report. Approximately 10 acres of property is needed to accommodate waterside and landside needs. Wetland restoration on both sides of the existing harbor is planned. The working waterfront is a key component of the City's downtown revitalization plan. In conjunction with existing Tidelands Funds, land and development costs are estimated to be$8.5M	Harrison	Yes	Yes	Yes		Yes	No	Yes	Yes	No		$ 8,500,000.00	$ 800,000.00	
	Workforce Development	1203	6/5/2013	Land Purchase for Port Bienville	(ORIGINAL ID#11996) Land purchase for future expansion at Port Bienville Industrial Park FACTS: PBIP's ideal geographical location constantly piques the interest of both current and future industries for expansion and location. Due to this increased interest raw vacant land is becoming a valuable commodity. The lack of populous neighborhoods around PBIP has always been a major inducement factor in industries locating at the port. This allows industries to expand without the worry of encroaching on residential communities. JUSTIFICATION: PBIP currently has only one large tract of vacant land (approx ... 400 acres) left for development. This parcel has basically been put on "hold" due to the interest expressed by an existing industry for future potential expansion. PBIP has no other large tracts of land to offer industry. The few remaining parcels, that are not in wetlands protected areas, are 20-25 acres in size. Normally industries look to 100 acres or more for new constr uction or expansion. REMEDY: Currently parcels to the east and north abutting PBIP have been identified as suitable areas for acquisition for future development. Due to their location the environmental impact for development on these parcels would be minimal. The parcels of interest also border our current rail spur making it an ideal location for location of industry with minimal cost of rail expansion.	Hancock	Yes	No	No		No	No	No	No	No		$ 1.20	$ -	
	Workforce Development	1254	11/22/2013	Marinovich plan to restore the gulf shrimp	Shrimp migrate in from the gulf three times a year.Research need to be done to establish when the shrimp move into the estuaries. On this bases the adult shrimp needs protecting when they move up out of the gulf to spawn. As a net maker I see this happen three times a year. Letting the shrimp spawn correctly will increase the juvenile release from the estuaries.(Letting the eggs, larvae juvenile and adult shrimp come safety into the estuaries without being caught by the shrimp trawls.) When we have maximum spawn we will have maximum juvenile release when the conditions are correct in the estuaries. This will help the ecology (example, more shrimp to feed fish etc.). Over time the shrimp population will increase and there will be more food for the whole ecology. After the migration is established then the law must be fixed in order to protect the shrimp from the nets when they are spawning. This involves changing the opening and closing of the shrimping season. The Marinovich Plan was researched twenty years ago and the shrimpers about 80 percent agreed to it. The Marinovich Plan has the dates when the shrimp spawn because it happen every year; but it has to be proven to the scientific community. Thank you for opportunity to make this proposal. Let work together to save the food for the gulf ecology.	Harrison, Jackson	Yes	Yes	No		Yes	Yes	Yes	Yes	No		$ -	$ -	
	Workforce Development	1255	12/3/2013	Gulf Observing Aerial Program	A diverse constellation of airships, airplanes, and UAVs should be put in place to provide long endurance observation of the Gulf. The primary purpose of the aerial fleet will be to closely monitor the offshore drilling community to immediately detect any oil spills, washed ashore oil deposits, or environmental damage to sea life, coastal marshes, etc. Additional functions of the aerial observing system would include maintaining cellular communications service during and after hurricanes, helping find disabled boats, tracking contraband vessels and airplanes, and other functions/capabilities of benefit to the public. MAC proposes to assemble a team of subcontractors that will provide the aerial platforms, provide maintenance and mission support, and operate from the Stennis International Airport, in Hancock County, Mississippi. MAC is proposing a "Mississippi Centric" team that will include the Mississippi Divisions of Lockheed Martin, Stark Aerospace, Northrop Grumman, Aurora Aerospace, Nvision, Optech, and others. MAC will prepare the overall plan, have constructed one of the world's largest hangars, procure the necessary aerial platforms and ground support equipment, and operate the system for the first seven years, at which time the MDEQ will call for proposals for an operational contractor for the second seven year period.	Hancock, Harrison	Yes	No	Yes		Yes	Yes	No	No	No		$ 360,000,000.00	$ -	

	Workforce Development	1259	12/3/2013	Ocean Springs YMCA Expansion/Renovation Plan	The Mississippi Gulf Coast YMCA located in Ocean Springs and Tradition serves the entire Gulf Coast region with our facilities and outreach programs. The 7,000+ members between our two branches have access to fitness equipment, group exercise classes, recreational and fitness activities in the pool, child watch, social and family activities, wellness programs, and corporate membership benefits. We are able to extend our reach to promote healthy communities through our after-school programs, career engagement programs, evidence-based chronic disease prevention programs, and water safety programs. The Mississippi Gulf Coast YMCA serves over 10,000 participants annually with 5,000 of those being under the age of 18. In the last 5 years, the Mississippi Gulf Coast YMCA has provided over $500,000 in free and subsidized programs to youth, families, and seniors seeking health and community. In order to have a greater impact to families and businesses on the Gulf Coast, the Mississippi Gulf Coast YMCA is proposing the renovation of the Herbert Wilson Community Center in Gulfport into a new facility. With this additional facility, the YMCA would be able to offer a family-based fitness facility convenient to residents and businesses in the area. (This would allow us tackle the health and social needs that affect the area including diabetes, hypertension, youth obesity, and arthritis with our chronic disease prevention programs, youth engagement, and after-school and camp programs.) The facility would benefit local employees through our corporate membership benefits program to provide employee wellness through membership at the Y. We assist employees and their families in managing their total health and well being through a variety of services such as adult and childrenâ€™s land and water-based fitness classes, reduced programming fees and other family-oriented activities and special events. In the 2017 County Health Rankings, Harrison County is ranked 24th while neighboring counties, Jackson and Hancock, are ranked 8th and 6th respectively. A local YMCA provides access to exercise opportunities, chronic disease prevention programs, youth programs, and social opportunities â€“ all areas that can improve the overall social and physical health of residents thus, improving the local health ranking. A new facility will not only serve Gulfport and Harrison County but will impact the quality of life in all surrounding areas including all 7 coastal counties in our service area. Having an additional facility can increase the number of these programs by increasing awareness of the programs to individuals, schools, and employers. Gulfport is a centrally located area along the coast that also brings coastal residents who may not reside there to the area for work. These outreach programs include programs to improve physical and social health as well as youth development. The following is a list outlining the current health statistics among residents, according to the Behavioral Risk Factor Surveillance Survey: â€¢ 31% of residents are overweight with 37% of those being obese, â€¢ 14% have diabetes and an additional 29% are at risk, â€¢ 35% have hypertension, and â€¢ 30% are considered sedentary in Health District XI which includes the coastal counties. The Mississippi Gulf Coast YMCA offers programs that can address all of these health issues as well as better our workforce and increase safety in water which is a large part of our culture. The Evidence-Based Health Initiatives offered at the YMCA currently include the Diabetesâ€™s Prevention Program, Healthy Weight and Your Child, and EnhanceÂ® Fitness. These programs are geared to meet the health needs of Gulf Coast residents through methods proven to increase activity and reduce weight. The Diabetes Prevention Program targets the 29% of adults over 18 who are at risk	Jackson	Yes	No	Yes		No	Yes	No	No	Yes		$ -	$ -	
	Workforce Development	1260	10/1/2014	Natural Resource Enterprises - Restoring Coastal Habitats and Economies along the Mississippi Gulf Coast	Conduct a series of 6 educational workshops training coastal landowners, sports fishing guides, commercial fishers, resource agency and economic development professionals, and community leaders along the MS Gulf Coast in natural resource enterprise development and associated land & water conservation practices. We will partner with agency and organizational partners, including but not limited to MS Department of Environmental Quality, MS Department of Marine Resources, Gulf Coast Research Laboratory, MSU Coastal Extension Service, Audubon Society, and local boards of supervisors and city officials to host these training events. We will train interested landowners, sports fishing guides, and commercial fishers to develop a diversity of outdoor adventure excursions drawing outdoor enthusiasts to the Mississippi Gulf Coast. Through development of these new businesses and associated conservation, we will improve the environmental health of coastal lands, wetlands, watersheds, estuaries, and the Mississippi Sound on the MS Gulf Coast.	Hancock, Harrison	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ 165,094.00	$ -	
	Workforce Development	1261	12/4/2013	Mississippi Gulf Coast Arboretum Trail -- Coastal Arboretums for Restore Canopy and Reduce Injury	The MS Urban Forest Council is a 30 year old nonprofit organization that works with community leadership and citizen to establish healthy tree canopies. We have the only arboretum program in the state and have been certifying arboretums in Ms for over 10 years. This project addresses community resilience, injury, restoring canopies, economic development, tourism benefits and much more. This project has two phases. Phase I of developing arboretums along the MS Gulf Coast will include 3 arboretum, one per county. The project is to scale, landscape level,easily managed, no land acquisition and shovel ready. We can have trees in the ground as early as six months after approval. This project will fully develop local public green spaces into arborvitae creating a network of linear green spaces. This project has multiple benefits - Community resilience, job training, eco-tourism, economic development, recreation, social and ecological benefits, water quality and storm mitigation, and other benefits. This project will be phase one on creating quality green spaces in the three coastal counties. Three sites (one per county) will be created another 10-20 existing sites will be identified and certified as arboretums. Phase II will include developing an arboretum for every coastal city, (12) sites. In all, a total of 15 arboretums developed and another 15 existing sites that can qualify as an arboretum will be certified. So when the project is complete there will be a minimum of 30 certified arboretums along the coast that can be linked as green way, tourism and promotion of communities and other sites. The arboretum will be included on a GPS system so that citizens and visitors can visit and view these sites. These sites will be highly visible. The value of related water quality functions will be determined for these sites based on i-Tree formulas. The project has four basic components. 1. The key objective is to establish healthy Ms Gulf Coast Arboretae in every city in the 3 counties of the Mississippi Gulf Coast; Harrison, Hancock and Jackson. 2. MUFC already has an established and working network of communities on the Ms Gulf Coast through the Scenic Communities and Tree City USA programs. We will work in partnership with local communities, other organizations and counties to plant perpetual green spaces, and provide management training, job training, and all resources to create sustainable green spaces. There are identified spaces on the coast that will remain forever green. Identified by the Gulf Legacy Inventory and the proposed urban tree canopy inventory. We will combine our efforts with other restore projects to add the urban forestry element. We will provide training and other skills, develop a long term inventory of trees, replant the right tree in the right place, address storm preparedness and ensure long term green infrastructure and healthy tree canopies. 3. We will work with each entity. responsible for these green spaces to develop a series of strategies/activities including massive tree planting. Currently, we have 15 Tree City USA on the MS coast. These partner communities will be included in our project. We will provide resources, training and strategies working with local communities, provide advanced long term training on tree maintenance and use of tree inventories to better manage trees and identify important environmental and social values for existing and new trees and community forests. The project will do all these activities through partnerships with local city/county to build knowledge, resilience, create citizen involvement, develop interactive conservation activities and ownership. Communities will learn community resilience aspects and connecting to a healthy gulf based on their actions within their own community. 4. Includes policy implementation on local and regional level as well as storm preparedness and mitigation for landscapes. Funding: This funding includes complete development of 15 arboretum inn the six coastal counties. Project elements include planting over 50 native species trees (1-3) inch trunk diameter), tree	Hancock, Harrison	Yes	Yes	Yes		Yes	Yes	No	No	Yes	water qua	$ 420,000.00	$ 50,000.00	
	Workforce Development	1265	12/4/2013	Restoration of the Gulf Coast Ecosystems	We represent companies and associations who welcome the nation to enjoy our seafood, one of a kind culture and world-class fisheries, beaches and tourist destinations, as well as the wide spectrum of firms poised to conduct future ecosystem restoration projects. As such, we encourage the use of funds from the recently passed RESTPRE the Gulf coast Act to create local job and training opportunities, strong communities, and long-term economic health by investing in the restoration of the Gulf's wetlands, oyster reefs and barrier islands. Gulf Coast ecosystems are an important economic driver for our state and our regional economy, helping us to provide critical services and products needed to drive job creation, including: - Production of 1.3 billion pounds of seafood annually --- with dockside value of $661 million; - Supporting the largest remaining wild oyster harvest in the world; - Attracting more than 23 million recreational fishing trips annually; and - Providing more than 600,000 jobs and $9 billion in wages annually in tourism and recreation. Healthy wetlands, barrier islands and oyster reefs also mitigate the impacts of hurricanes and other extreme weather events on our communities and other coastal assets. The annual losses associated with these events are currently estimated at approximately $17 billion. Thanks to the resources made available through the RESTORE Act, there is an unprecedented opportunity to restore the Gulf, to strengthen our traditional industries, create new economic mobility and accelerate emerging markets centered on environmental restoration. Costal restoration projects will create new business for a wide variety of firms in the engineering, construction, transportation, and manufacturing sectors, generating demand for more workers across these sectors. As a result, there will be new opportunities for employment of Gulf Coast residents, which will increase as innovative technologies are developed and exported out of the region. Further, the restoration of the Gulf of Mexico will draw more visitors to our beaches and towns, promote thriving fisheries, and make our communities more resilient in the face of future storms and sea level rise. These benefits can only be realized with a significant investment of RESTORE Act funds into ecosystem restoration projects. A recent study conducted by Mather Economics estimated that investing these oil spill penalty funds into ecosystem restoration projects could create 77,453 new jobs over 50 years. We, therefore, encourage you to invest a substantial amount of the oil spill penalty funds from the RESTORE Act into these types of projects, which will reap the maximum benefits for the long-term prosperity of our region. Additionally, we believe it is good public policy for firms involved in ecosystem restoration projects to work in partnership with government and workforce development stakeholders to increase their abilities to prepare and hire qualified local, low income and disadvantaged workers. Those of us that may be involved in these projects stand prepared to partner with the State to identify the necessary skill-sets and training programs to prepare our stat's workforce to conduct future restoration projects and find new economic opportunities. We encourage the State to invest a portion of the RESTORE Act funds that will be allocated to the State for this new challenge.	Hancock, Harrison	Yes	Yes	No		Yes	No	Yes	Yes	Yes		$ -	$ -	
	Workforce Development	1273	12/9/2013	Adaptive Sports Program	"If they dream about it, they can do it!" Provide a means for all people to enjoy inlet waterways and adapt multi-use facility to accommodate mobility impaired citizens and wounded warriors. -New and existing multi-use facilities need to be built or added to for accommodating mobility impaired citizens and wounded warriors. To enable Disability Community options enhancements of family Orientated Recreational Activities /Educational/Stewardship programs for all ages or even physically unconditioned Citizens	Hancock, Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ -	$ -	
	Workforce Development	1589	8/2/2011	Maritime & Seafood Industry Museum Expansion with Restoration Initiatives	(ORIGINAL ID#761)The Maritime & Seafood Industry Museum located on Pt. Cadet, Harrison County, Biloxi, MS serves as a welcoming beacon to the great City of Biloxi, an educational tool and a superior exhibit, for residents and visitors of the Mississippi Gulf Coast region, and for the great state of Mississippi. The Museum was established in March 1986 to preserve and interpret the maritime history and heritage of Biloxi and the Mississippi Gulf Coast, which came to prominence more than a century ago as one of the worldâ€™s great seafood producers. Since itâ€™s opening, the Maritime and Seafood Industry Museum has become recognized for its interpretation of Mississippi Gulf Coast history, culture, and heritage. The Museum exhibits, the replicated sailing schooners, the educational programs, the schooner pier complex, and the research collections have proven invaluable to the citizenry of Mississippi as well as national and international clientele. Special programs held within the museum, has seen it featured on regional and national television. The Museum expanded another 8,000 sq. ft. in 2003 and in 2005 was destroyed by Hurricane Katrina. The new three story 20,000 sq. ft. museum reopened in August 2014 at a cost of approximately $10 million. Since 1986, the Museum has been on a steady path of accomplishment â€“ from our award-winning building to our exhibits and tools â€“ but there is much more to accomplish. Our educational and economic impact within the community, the region and the state has made the Maritime and Seafood Industry Museum a destination of enjoyment and a significant economic contributor. Our $8 million expansion would build a state of the art Exhibit Hall that will play host to world class traveling exhibits. The Museum is convinced the addition of the Exhibit Hall will elevate the Museum experience and enhance the regional economy through the distribution of admission dollars and funds raised from sponsored traveling exhibits. It would also enable the Museum a larger venue for convention space for one night events away from the Casinos. Tourism is frequently seen as a way of creating new employment opportunities in regions which have suffered from devastating hurricanes or oil spills. Mississippiâ€™s Gulf Coast has embraced the tourist industry, bringing in major casinos and support services to keep tourist engaged. Visitors stay at hotels, eat at restaurants, visit cultural sites and consume goods and services within a local economy. This serves as an economic boon to drive benefits across many other sectors. Regional museums are an important magnet to draw visitors, as they flavor the experience, present the regionâ€™s history, display their treasures and share the artistic and cultural essence of the region. Giving visitors a variety of exciting activities and events impacts their experience and ensures their return. Recently published reports from the American Alliance of Museums, show indisputable evidence that museums are true economic engines for their communities, supporting jobs and wages that are vital to the health of their hometowns. And, as an industry, Museums have widespread public support that transcends political affiliations and geographic locations. Along with the revenue generated from patron visits, museums have a wider economic impact as they purchase goods and services from local vendors (such as caterers, exhibit designers, and window washers), and provide community gathering spaces and alternate venues for conferences and social gatherings. Now, it is time to enhance our offering to the public, while enhancing the regional economy. And with these goals in mind, we are requesting the assistance of the Resources and Ecosystems Sustainability, Tourist Opportunity and Revived Economies of the Gulf States Act of 2011 (RESTORE).	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 7,549,904.00	$ -	

	Workforce Development	1614	12/2/2011	Mississippi Invasive Plant Control Program-Congongrass Eradication Effort	(ORIGINAL ID#11538) Cogongrass (Imperata cylindrica) is an invasive, non-native grass, which occurs in the southeastern United States. A pest in 73 countries and considered to be one of the Top 10 Worst Weeds in the World. Cogongrass affects ecosystem survival, wildlife habitat, recreation, native plants, fire behavior, site management costs and more. Cogongrass is currently documented in 62 of the 82 counties in Mississippi and has become an extremely serious problem in MS Gulf Coastal Counties. Cogongrass negatively affects native ecosystems by creating a monoculture of itself wherever it occurs. It disrupts natural ecosystems and displaces native plant and animal species, including many listed as threatened or endangered, such as: the Gopher Tortoise, Black Pine Snake, MS Redbelly Turtle, Eastern Indigo Snake, MS Sand Hill crane, Red-Cockaded Woodpecker, Yellow-Blotched Map Turtle, Pondberry, and Louisiana Quillwort. Cogongrass creates extremely hazardous fire conditions for flora, fauna and humans. Due to it's high silica content, Cogongrass burns on the average four (4) times hotter than normal native fuel loads. Native ecosystems have evolved to thrive in normal pyric events. The hyper-intense fires of Cogongrass exceed the temperature level of normal environmental fires, thereby decimating native ecosystems and their inherent ability to recover and restore post-pyric biodiversity. Cogongrass also presents an economic strain to the already reduced economy of South Mississippi. It competes with all species of timber producing trees for nutrients and water, thereby reducing financial forestry growth rates. Even domestic live-stock growers are affected because Cogongrass is not palatable to cows or other livestock. Various agencies, both federal and state, have conducted Cogongrass control programs throughout the state. While these have been effective at suppression on a local basis, none has had the means to attempt eradication, in a systematic logistical manner in South Mississippi along the Gulf Coastal Counties most affected by Cogongrass. Therefore the Mississippi Forestry Commission is soliciting the Restore Program for aid. The focus of this project will be eradicating the non-native, invasive Cogongrass and restoring native ecosystems for the protection habitat for native flora and fauna. This is in turn will increase biologic diversity and both the inherent natural and economic value of Gulf Coastal ecosystems and forest. Proposal Objective: Identification/education/treatment program â€" Treatment of active cogongrass spots is very important in the suppression of this non-native plant species. With the average cost being $579 / acre for treatment, it is quite expensive and cost prohibitive for many landowners to fund treatment. All of the funding for this project will be used to fund treatment programs in Hancock, Harrison and Jackson Counties, MS. We will treat the small spots using MFC personnel. For larger areas, we will schedule treatments by contract vendor. An extensive database will be maintained, along with GIS shape files, of all infestations mapped and treated. Timeline: Five years from approval Budget: $10,000,000.00 Actions, Outcomes, Costs, Timeframe: â—¾Provide The MFC with $10,000,000.00 for cogongrass control activities through Landowner Assistance Programs â—¾Based on Mississippi Cogongrass Eradication Programs, it costs $579 per acre to control cogongrass. This funding would equate to controlling 17,271.16 acres of cogongrass in Hancock, Harrison and Jackson Counties, MS. Using the statewide average of 0.134 acres per infestation that would equate to treating 128,889 infested spots. â—¾The MFC will provide infrastructure for control, implementation, and outreach. â—¾Will include hiring contractors for spraying infestations â—¾May include hiring of part-time forest plant specialists	Hancock, Harrison	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 10,000,000.00	$ 300,000.00	
	Workforce Development	1665	1/20/2014	North Gulfport Sewer Expansion	In December of 1993, the City of Gulfport annexed 33 square miles north of its then current limits making it the second largest city in Mississippi. As with any annexation, the City has since worked on incorporating private infrastructure into its public system. This infrastructure project consists of adding sewer service to 17 different areas encompassing over three square miles in northern portions of the City still on private sewer and septic systems. Providing access to adequate sewer utilities could benefit the local economy and stimulate job-creation by encouraging future development. Similarly, this project could benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10. It would also serve to benefit the local ecological resources by removing environmentally-taxing septic tanks. This would help improve water quality by alleviating nutrients and pollutants discharged into nearby Fritz Creek, Flat Branch, and water tables from damaged and/or overflowing septic tanks. Aside from the construction jobs offered by this project, it also promotes development of workforce housing.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 5,200,000.00	$ -	
	Workforce Development	1666	1/20/2014	Three Rivers Rd Widening	Located immediately north of a 0.5 mile stretch of a four lane section of Three Rivers Rd (from Creosote Rd to Seaway Rd), the bulk of the approximately 1.25 mile stretch of Three Rivers Rd between the industrialized Seaway Rd and Dedeaux Rd is two lanes with no center turn lane. This commercial corridor is vital to the City of Gulfport economy as Three Rivers Rd provides direct access between the Gulfport-Biloxi International Airport and many commercial developments, and between the airport and Dedeaux Rd. This project seeks to widen this 1.25 mile stretch from the existing two lane road to a proposed four lanes with a center turn lane. Combined with the Dedeaux Rd widening project currently under design, with recently constructed projects, and with other already-funded design projects in the area, this project will be the last leg of 5-laning all main collector roads on the heavily-commercialized north side of the airport. The economic benefits of the road widening in this area will be realized with the potential for new businesses and tax revenues also bringing needed jobs to the area. The quality of life improvements for these businesses and local residents will be seen in less congested and safer roadways. It will also benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10. Finally, this project will improve the ability of the public and tourists to access recreational areas as there are two campgrounds on this stretch of road offering approximately 170 campsites. This project improves public access to recreational activities by providing a connecting sidewalk between Seaway Road and Dedeaux road. These pedestrian and bike paths will be the last section needed to connect the Beach all the way to the Crossroads development.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 5,000,000.00	$ -	
	Workforce Development	1671	1/20/2014	Canal Rd/28th St Elevated Tank and Water Main	Located at the intersection of 28th St and Canal Rd near the western corporate limits of the City of Gulfport, immediately north of the Naval Construction Battalion Center (NCBC) of Gulfport, this project seeks to install a new elevated storage tank to replace the existing 75,000 gallon tank in the area. This project will also provide new public water mains along Canal Rd to strengthen existing infrastructure. The proposed water tank and water infrastructure will provide more capacity and more reliable service for the City of Gulfport system. With proposed Navy Base upgrades and expansions combined particularly with the needs of the nearby Port of Gulfport expansion, upgrades to the existing water system are imperative for the City to provide adequate service to all existing and proposed customers in order to encourage not stifle economic development. This project will provide an immediate pressure and capacity upgrade to allow for uninterrupted service to existing and future customers, allowing for future business in the area resulting in more tax revenue for the City, more jobs for its citizens, and more utility customers.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 3,500,000.00	$ -	
	Workforce Development	1676	1/20/2014	MS 605/Lorraine Rd St Lighting at Seaway Island	The length of Lorraine Rd (MS 605) along Seaway Island currently has no street lights. However, both the south side and north side of Seaway Islands are well lit. This section of non-contiguous lighting on Seaway Island has created less desirable conditions for commercial development. This project proposes to install street lights along Lorraine Rd the length of Seaway Island (from Kramer Marina to Industrial Seaway). This better visibility during evenings should encourage more businesses to develop the many existing vacant lots resulting in jobs for the community and tax revenue for the City. This project will also improve the quality of life for local residents and business by increasing safety along Lorraine.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 650,000.00	$ -	
	Workforce Development	1677	1/20/2014	Gulfport Sportsplex Expansion	The City of Gulfport's Sportsplex is strategically located near the northwest corner of the busy intersection of Interstate 10 and Highway 49. The facility offers 9 multipurpose baseball/softball fields, 4 Multipurpose athletic fields (i.e. soccer), associated buildings (concessions, restrooms, maintenance, etc.), associated infrastructure, and an area leased to Gulf Islands Waterpark. In 2013, this facility directly produced nearly $100,000 in revenue and is estimated to have had a $20-$25 million total economic impact. The bulk of this impact came from the 52 tournaments across 6 different sports hosted at the Sportsplex in 2013 alone. Despite its ongoing success, the facilities size and field offering limits the types of tournaments and other opportunities it can handle. Routinely, regional tournaments consider the Mississippi Gulf Coast for its centralized location, but ultimately are relocated to competitive markets due to the lack of facilities. This proposed project consist of three concurrent phases. First, after its 14 years of operation, a growing number of repairs and improvements to existing facilities is required. Secondly, the City of Gulfport already owns enough land to add some facilities; current planning efforts consider adding: batting cage facilities, 4 soccer/multipurpose fields, 8 tennis courts, 4 baseball/softball fields, and associated infrastructure. The final step of this proposed project would be land acquisition north to Landon Road for additional expansion. This would provide the Sportsplex with the remaining area and facilities needed to expand to be truly competitive in this growing market. All portions of this work would be designed to compliment the wetlands within and adjacent to the Sportsplex with onsite mitigation possible. The opportunities associated with this project would further bolster the already notable revenues and economic impacts of Gulfport's Sportsplex. Encouraging economic development in this area will also benefit community-resilience as it is within portions of the city generally located outside the FEMA-established floodplains that are more common south of I-10. Finally, the entire Mississippi Gulf Coast would also see a significant increase in tourism with every tournament hosted.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 15,000,000.00	$ -	
	Workforce Development	1678	1/21/2014	O'Neal Rd Widening	The City of Gulfport has been experiencing rapid growth north of I-10. In order to accommodate this growth and make the area attractive to future residents and businesses, upgrades to circulation are required. One area of interest is Oâ€™Neal Rd, a major east/west thoroughfare connecting MS 605 with Hwy 49. An existing one mile stretch of O'Neal Rd between Three Rivers Rd and Flat Branch is a two lane road with no center turn lane and no curb and gutter. This project proposes to widen this heavily developed stretch to a proposed two lanes and a center turn lane with curb and gutter on both sides. This road section would then match the road section to the west from Hwy 49 to Flat Branch Creek, completing road widening between Hwy 49 and Three Rivers Rd. The quality of life improvements for commuters in this area would be realized immediately by improving traffic speeds and eliminating dangerous left-hand movements from travel lanes. Furthermore, the increased traffic flow and capacity would entice new development and provide for future tax revenues for the City. This project is vital to provide an important east/west connection between US Hwy 49 and MS 605 which will in turn decongest clogged traffic routes north of I-10. It will increase community-resilience by providing a critical link between US 49 and MS 605 for emergency evacuation preparedness. It will also benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 10,000,000.00	$ -	
	Workforce Development	1679	1/21/2014	Hancock County Marsh Living Shoreline Project	We have designed and patented a system that will help control effects of sea rise. Our system will provide shoreline protection, will enhance building of habitat, and will assure land building. Designed to replace rock jetty, our new concept (Geo-TECH-Jetti) is installed above the water line, considering projected sea rise (as determined by official government determinations). Our Geo-TECH-Jetti units are filled with dredged material sourced from near the installation. Within a prepared area on top of the Geo-tech containers are RootZone Humus-filled, (RZHO), biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Our specialized method, proven in several previous deployments, ensures highly energetic and sustained plant growth, while providing shoreline force and sea-rise protection. Land building also results as these solutions continue to work efficiently, while cooperating with nature. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. The PVC stabilization devices are designed so that they can be retrieved at a future time, when it may be determined that plant rooting and accretion has been achieved and our â€œholdâ€ feature is no longer needed. Our proven methods allow for replacement of rock as stabilization means. Using our proven methods, we ensure rapid reestablishment of habitat. Shellfish, fin-fishes, invertebrates, and other vital coastal organisms are able to reestablish populations. Installing our Geo-TECH-Jetti units, we accomplish rapid rebuilding of the entire food-web, by providing the multiple benefits. (1) We provide protection from sea-rise. (2) We ensure rapid establishment of native plants along shorelines, making possible rapid habitat establishment. (3) Our methods assure accretion, as the long, well-set units of Geo-TECH-Jetti prevent erosion. (4) The Geo-TECH-Jetties also provide protection from surface and sub-surface oil encroachment on shorelines and into adjacent marshes. (5) Shoreline areas of land, (marshes or barrier island shores), behind the rows of Geo-TECH-Jetti units are filled with dredged material has our process continues, the filled RZH and RZHO are applied to ensure fertility. The Geo-TECH-Jetti is set in place, working from barges. Our Geo-TECH-Jetti Placement System makes it possible for us to position units efficiently, one in front of the other, and over lapping with space between them allowing existing habitat to continue functions as installation is accomplished. If it is decided that marsh or shoreline is not to be filled in some areas where Geo-TECH-Jetti are being installed, our units are set next to each other and can be used to serve as solid shoreline protection without back-filling.	Hancock	Yes	Yes	No		Yes	Yes	No	No	No		$ 6,248,000.00	$ -	

	Workforce Development	1681	1/22/2014	Hancock County Marsh Living Shoreline	After 46 acres of dredge material is installed Trident is proposing to plant approx: 802,000 native coastal grasses and plants with RZHO (compost). Placed every 2.5 feet. Monitor growth for 1 year. Hire local labor and suppliers. Project coincides with installation of the Geo-TECH-Jetti Units . Project ID #1679 Planning on budgeting for the installation of dredge fill and 46 acres of subtidal oyster reef on another project sheets.	Plaquemines (I thi	Yes	Yes	Yes		Yes	Yes	No	Yes	No		$ 2,110,000.00	$ -	
	Workforce Development	1684	2/3/2014	Hancock County Living Marsh Shoreline Project	Mitchell Marine, Inc. will use a 12" hydraulic dredge to move material from a mining area 2000 feet off the shore to fill behind manmade berms. Approximately 130,000 yards of material will be moved over the planned berm area. Mitchell Marine is located in Biloxi MS. This coincide with Project # 1679 and 1681.	Hancock	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 5,923,200.00	$ -	
	Workforce Development	1691	2/3/2014	Hancock County Living Marsh Project	Propose to deploy 435 tons per acre on 46 acres to equal 20,000 tons for Oyster Cultch. The material used will be 10% oyster shell and 90% #57 limestone. All work will be done in a minimum of 4 ft. of water at mean low tide.	Hancock	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 2,469,200.00	$ -	
	Workforce Development	1712	12/24/2015	BP for restoring the gulf fisheries	This program will address fishery management needs in the Gulf of Mexico for the commercial, CFH and the recreational anglers. This "BluePrint for Restoring The Gulf Fisheries will be lost if not funded . This program will provide help with discards of reef fish, provide Seafood for the Consumer and provide a pilot program To test a method that will allow anglers the opportunity to fish all year for red snapper and grouper. This program will also allow the opportunity to study behavioral science. This program will address accountability and sustainability of our coastal marine resource and those that rely upon the resource for food , jobs and pleasure. The programs infrastructure contain many components. This program will Include state agency's , commercial, CFH and private anglers. It will also have help from the Southeast science center with its design. A full proposal will be submitted if the council feels they are interested in a proposal that would test a license limitation for our recreational anglers. The fish would be leased from the present commercial quota so that it would not impact the regular open season. It would also collect data that is presently missing and needed inorder to have a sustainable fishery for years to come. It will cost 31/2 million to lease the fish for the pilot study. The remaining amount will be spent on outreach. Forms. Techs. Taes . Pl. analysis etc.	Harrison, Hancock	Yes	Yes	Yes	15	Yes	Yes	Yes	Yes	Yes	Data need	$ 5,000,000.00	$ -	
	Workforce Development	1720	2/6/2014	Handcock County Living Marsh Shoreline Protection	This is a add alternate to base bid. Project ID#'s 1679, 1681, 1684 and 1691. Install 600 Geo-TECH-Jetti Units fill with dredge material and on top of the Geo-tech containers are RootZone Humus-filled, (RZHO),biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. Back fill 114,000 cubic yards dredge material within 40 acres behind Geo-TECH-Jetti Units.	Hancock	Yes	Yes	No		No	No	No	No	No		$ 8,575,200.00	$ -	
	Workforce Development	1725	2/7/2014	Hancock County Living Marsh Shoreline Protection/ Oyster Clutch	This proposal coincides with project ID# 1720 has add alternate. Propose to deploy 435 tons per acre on 95 acres to equal 42,000 tons for Oyster Cultch. The material used will be 10% oyster shell and 90% #57 limestone.All work will be done in a minimum of 4 ft. of water at mean low tide.	Hancock	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 5,068,500.00	$ -	
	Workforce Development	1734	6/13/2013	Water Clarity and Filtration System	In August 2011, the Gautier City Council adopted a Clear Water Filtration Plan that utilizes ion exchange filtration technology in order to provide clear drinking water with much lower annual operating and maintenance costs than osmosis. Today, the brownish tint in Gautierâ€™s potable wells has impeded economic development such as hotel, restaurant and residential development. Due to the debt incurred when the City incorporated and assumed the previous utility authority, the City has not previously been able to afford the expense of an osmosis treatment facility. The newer technology of ion exchange has proven successful in states such as Florida. Gautier will be the first municipality in Mississippi utilizing ion exchange technology to provide water clarity. The system is planned in three phases. The first phase will provide a filter system treating one million gallons per day, projected to treat 80% of the Cityâ€™s demand and costing $2.8 million. The second and third phases will serve the remaining population along the HWY 57/I-10 corridor and loop the filtration system for future capacity. The total cost of the three phase project is estimated to be $4.5 million. Color in groundwater may be attributed to a variety of sources including iron, manganese and organic acids. Color associated with organic acids can be measured quantitatively and represented as total organic carbon. Organic carbon is typically negatively charged which can be effectively removed with a process known as ion exchange. Ion exchange promotes chemical reactions to effectively remove deleterious compounds found in water. The Gautier Water Treatment Plant was piloted and designed to effectively remove color by utilizing oxidation, coagulation, and filtration followed by ion exchange. Projects such as this one will not only create jobs but will create the necessary infrastructure for future development and the economic growth/tourism industry. Improved water quality is a primary objective in all watersheds but specifically in coastal watersheds that feed directly into the Gulf of Mexico.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 4,500,000.00	$ -	
	Workforce Development	1735	6/13/2013	Interstate 10/Highway 57 Commerce and Technology Corridor	With over 6 miles of interstate frontage, the City of Gautier only has access to 2 interstate interchanges. At these interchanges, the only opportunity for interstate frontage development is at the northeast corner of Highway 57/Interstate 10. One large development in this area is underway and another existing development is expanding. The Bienville Medical Complex will be over 100,000 square feet with an ambulatory center, located on 16 acres of land. The City has adopted a master plan for the smart growth of this area, and requires the installation of a water tank, fiber optics and utilities in order to provide adequate levels of surface for the anticipated growth in this area. See the attached Exhibit showing the Master Plan for the area. The project will provide new streets, drainage, utilities, lighting, a multi-use pathway and recreational amenities around the existing lake, and other related improvements.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 25,000,000.00	$ -	
	Workforce Development	1741	6/1/2014	MS Gulf Coast Environmental Educational Collaborative	Coast Ecosystem Education and Training Collaborative (CEETC) The Oil Spill has further exacerbated the gap between disadvantaged minorities (African-Americans, Hispanic, Vietnamese and low income whites) and available education funding, job loss and access to marine vessels for education. The Mississippi Gulf Coast includes approximately 70 miles of coastline plus numerous bays, estuaries and navigable rivers. Not only does this ecosystem support a diversity of marine life and habitats, but our coastal waters support an economy that generates nearly $146 million each year. Unfortunately, although the Coastal Counties (Hancock, Harrison, and Jackson) have an abundance of diverse ecosystems, recreational opportunities, and marine life education minority children rarely get the chance to experience any of this richness. It is the goal of CEETC to connect under-served children from Hancock, Harrison, and Jackson counties (to include African Americans, Hispanics and Vietnamese but not limited to) with their habitat through our hands-on and feet-wet adventures. Connecting our youth to the outdoors will offer a learning experience that has been previously accessible only to the more affluent, as well as open doors to career opportunities in the fishing industry, marine biology, conservation, and eco-science in general. The CEETC project will be a multi-year (4 years) year-round and ongoing ecosystem,environmental, educational and recreational project designed to educate coastal youth in the area of marine life studies, in addition to the aforementioned. All of the environmental education programs will be in partnership with the eight (8) school districts in the three (3) county area along the Mississippi Gulf Coast and each school district's science/marine biology courses. All of the educational programs will also be in partnership with the Mississippi Gulf Coast Community College Marine Biology Dept. The marine life studies program will through some classroom, water safety classes (swimming and water survival), marine field trips, and practical experience provide instruction on the general ecology, habitats, vegetation types, wildlife and conservation issues of Coastal Mississippi. Other activities include, but are not limited to: the environmental and health hazards of marine debris, water and shore cleanups in conjunction with state environmental agencies to educate and certify young adults to work in environmental hazardous spills, study and observation of marine wildlife, laboratory investigations, marine arts and crafts, fishing, fish identifications, insects and vegetation in our ecosystem, and an introduction to the micro-organisms in our water. This education will include aquatic life, tributaries, and basins connected to the Gulf. "To protect and restore the Mississippi Gulf Coast Ecosystems through education, research and community stewardship." STRATEGY A: COLLABORATION Bring marine scientists, ecologists and organizations together to share resources and talents to effectively educate and mentor the under-served youth. STRATEGY B: EDUCATION	Hancock, Harrison	Yes	Yes	No		Yes	Yes	No	No	No		$ 750,000.00	$ -	
	Workforce Development	1747	2/18/2014	ECHCPUD Water and Sewer Master Plan	The project includes water distribution and sewer collection improvement within ECHCPUD and extending 1 (one) mile beyond ECHCPUD's boundary. The water and sewer improvements proposed are anticipated to serve ECHCPUD for the next ten years.	Harrison	Yes	No	Yes	100	Yes	No	No	Yes	No		$ 13,400,000.00	$ -	
	Workforce Development	1764	2/24/2014	Medical Monitoring Program of Coastal Mississippians	This Request for Funding should be granted because it is one of the few proposals submitted for consideration which seeks to achieve several of the specific goals and objectives originally sought to be addressed by the Trustees of the BP Restoration Fund. The Proposal that follows will sever to promote proactive environmental and cultural stewardship, education and outreach based on the gathering of real time data outlining how and to what extent, if at all, the substance released during the BO oil spill and the agents used to disperse the same has or will impact and/or affect the health of those persons living within the three-county, Mississippi Gulf Coast, area of South Mississippi who were directly or indirectly exposed to the released substance and/or the agents used to disperse the release substance. Form strictly an educational point of view, data will be gathered and disseminated to the MDEQ, EPA, DOI, CDC, Mississippi State Board of Public Health and any other regulatory bodies whose jurisdiction requires notification should there be evidence of any type of alarming trend related to a claimed exposure. Additionally, by capturing such data this will allow us to measure the human toll, if any, proximately related to the exposure to the substance and to identify the proper medical or treatment plans of care that produces the best and most expeditious outcomes. having such information at our disposal will better equip our nation and more specifically the State of Mississippi and the entire Gulf Coast Region with the knowledge to properly respond to similar spills and/or release in the future. Another anticipated byproduct of implementation herein of the proposed medical monitoring system will be a healthier South Mississippi. Through the use and implementation of preventive healthcare techniques, physician led and sponsored encouragement, proactive and preventative healthcare maintenance, it is believed that recreational prowessess among many who live within the three-county Mississippi Gulf Coast area will become the watch-word of the day and we will see individuals who will begin to strive to attain and live a more healthy lifestyle. Finally, funding of this request will have a specific intangible benefit of increasing the public's confidence that an independent group of healthcare professionals are monitoring the potential health effects of the oil spill as it relates to South Mississippians who may have been exposed to the same, either directly or indirectly, and that such group of diverse professionals are positioned to disseminate accurate and unbiased information. This will help to dispel much of the misinformaton that has been disseminated by parties on every side of this controversy.	Hancock, Harrison	Yes	Yes	Yes	27.6	Yes	Yes	No	No	Yes		$ 14,121,000.00	$ -	
	Workforce Development	1769	3/20/2014	Restoration of Bayou Cassotte, Bayou Chicot, Parsley Avenue, and Enger Bayou	This project will consist of water quality improvements through sediment removal in the identified degraded Bayous in this watershed. The purpose of sediment removal is to restore degraded green corridors to allow for increased boat traffic and efficient access to natural resources. These bayous have vast potential for restoration that greatly enhances their ecological value while directly engaging local communities. Restored streams help to manage storm water runoff, erosion, and sedimentation as well as provide quality habitat for wildlife. With a greater potential to manage stormwater runoff, the communities within the watershed show an improved resilience to the increase risks associated with sea-level rise and environmental stressors.	Jackson	Yes	Yes	No		No	No	Yes	No	No		$ -	$ -	
	Workforce Development	1781	3/21/2014	Transportation Improvements	This project will improve McClelland, Tucker, and Seaman Roads by expanding the existing roadway design. A new I-10 collector will also be constructed. McClelland Road improvements will expand the existing 2-lane to a 4-lane road in order to create a strong network of transportation routes from I-10 to the Sportsplex. Tucker Road improvements will expand the existing 2-lane to a 3-lane road between McClelland to Daisy Vestry. Seaman Road improvements will expand the existing 2-land to a 3-lane road between Tucker and Jordan. The I-10 Collector project will create a new road between tucker and the county line; this will connect the Sportsplex area to the neighboring county and D'Iberville shopping center along Promenade pkwy/Mallett Road. The goal of this project is to promote economic development through infrastructure improvements. The project will help connect tourists and tournament guest to other shopping and dining areas a well as allow for expansion of the current shopping area into Jackson County.	Jackson	Yes	No	Yes		Yes	No	No	Yes	Yes		$ -	$ -	
	Workforce Development	1784	3/21/2014	Moss Point Open-Air Market	This project will create a space near the Riverfront Community Center that will house a open-air farmers market. The amenities will include a marquee that houses stalls for venders to sell wares, a picnic area, and restroom facilities. The market will serve to showcase local artisans and small businesses, enriching the quality of life in Moss Point as well as promoting economic development along the Greenway. The market will serve as a point of interest and generate tourism. The goal of the Moss Point Open-Air Market will be to serve as an anchor in the community by providing access to fresh locally grown food, generate support for the local economy, and increase healthy lifestyle opportunities.	Jackson	Yes	No	Yes		Yes	No	No	Yes	Yes		$ -	$ -	

	Workforce Development	1787	3/21/2014	Jackson County Scenic Water Trail, North Trailhead	This trailhead project will consist of a trail head with public boating access, walking trail, heritage museum and outpost. The Carter Lake Fishing Outpost will restore Carter Lake and provide recreational fishing near the Northern Trailhead. The Pascagoula Water Trail Cultural and Research Center will create an interactive culture and science center. The cultural center will focus on the native American culture for which the region derives its name and the science center will highlight conservation effects of natural wildlife mainly the efforts of the Pascagoula Wildlife Management Area. This center will serve as the primary information center for the entire trail. The North Trailhead Walking Trails will consist of walking trails adjacent to the river trail and Research center. This provides visitors not going on the water trail a small glimpse into the natural beauty of the Pascagoula River. North Trailhead Water Craft Outfit will develop an extension service that provides kayak, canoe, and other watercraft rentals to visitors. North Trailhead Boat Launch will create a boat ramp from which visitors to the Northern Trailhead can start down the Water Trail. Pascagoula River Scenic Water Trail Campground will create a campground along the water trail open to both tents and RVs, extending the stay of visitors to the area. Old Americas Road and Cedar Creek will be improved from the existing 2-lane road to a 3-lane to handle increased traffic volume to the North Trailhead. Pascagoula River Trail Road will be constructed as a new road tying Cedar Creek to the North Trailhead.	Jackson	Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ -	$ -	
	Workforce Development	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kempâ€™s Ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kempâ€™s ridley sea turtles are a Critically Endangered species that relies heavily on the north-central Gulf of Mexico for developmental habitat for foraging juveniles and sub-adults. Since 2010, more than 800 sea turtles, mostly immature Kempâ€™s ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kempâ€™s ridleys have been incidentally hooked at local fishing piers in Mississippi. A variety of factors are likely responsible for increased strandings including degradation of natural oyster reefs and subsequent declines in abundance of essential prey items of the species that rely on these habitats. Declared failures of both oyster and blue crab fisheries in recent years support this hypothesis and illuminate the importance of a healthy ecosystem for recovering populations of Kempâ€™s ridleys. The purpose of this project is to facilitate the recovery of Kempâ€™s ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kempâ€™s ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kempâ€™s ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kempâ€™s ridleys and their prey, will promote the restoration and recovery of Kempâ€™s ridley prey species, and could potentially promote development of new economic opportunities associated with stock enhancement. Recent research led by IMMS has revealed that the Mississippi Sound is a vital developmental habitat for Kempâ€™s ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kempâ€™s ridleys has indicated the importance of these areas for developing sea turtles. To promote the restoration and recovery of this endangered species, continued monitoring of its important habitats and prey and enhancement of local stocks of prey items is essential. Ultimately, this work is will play an important role in both ecosystem and economic restoration of the north-central Gulf of Mexico.	Hancock, Jackson,	Yes	Yes	Yes	60	No	Yes	Yes	No	No		$ 18,000,000.00	$ -	
	Workforce Development	1803	4/5/2014	Property Acquisition East Pascagoula River (Fletchas Acquisition)	Property owned by the Fletchas family has long been used as an industrial shipyard on some of the most attractive waterfront property in the City. This project proposes to acquire the property, remediate, and clear it for further development.	Jackson	Yes	Yes	Yes		Yes	No	No	Yes	Yes		$ 10,189,000.00	$ -	
	Workforce Development	1804	4/5/2014	Pascagoula Riverfront Acquisition	The proposed property acquisition will allow the Riverfront Redevelopment project, started with MDA/CDBG funding to continue to grow both north and south. The project includes acquisition and infrastructure upgrades.	Jackson	Yes	No	Yes	10	Yes	No	No	Yes	Yes		$ 6,538,900.00	$ -	
	Workforce Development	1833	5/14/2014	Center for Plankton Taxonomy and Research	: Ichthyoplankton and zooplankton surveys provide critical information needed to assess changes in our marine ecosystems due to 1) anthropogenic perturbations, such as the Deepwater Horizon oil spil; 2) climate change; 3) biodiversity loss; 4) the top-down effects on marine food chains from over-fishing; and 5) the reduction of recruitment success for a growing number of fish stocks. These data are being used increasingly as â€œhealthâ€Indicators for ecosystems and fishery stocks, yet research is severely limited by the lack of taxonomic expertise needed to identify fish eggs, fish larvae, and zooplankton. Large plankton survey programs operated by many NOAA Fisheries Centers currently use international fisheries agreements to facilitate the sorting and identification of their plankton samples. Our proposal recognizes the growing need for taxonomic expertise in this area, and establishes a Mississippi-based, Center for Plankton Taxonomy and Research. The overall goal of this center is to provide scientific and technical services for the analysis of plankton samples, including 1) sample sorting; 2) microscopic examination, identification and measurement of planktonic organisms; 3) molecular identification of fish eggs, early larval stages, and other plankton; 4) digital identification, measurement, enumeration and archiving of samples using advanced technologies, such as Zooscan, benchtop video plankton recorders, and flowcams; 5) trophic analyses using gut content examinations and stable isotopes; and 6) other related services as dictated by the clients. This center would support scientific and restoration efforts throughout the Gulf of Mexico region (and beyond), and serve as a resource for government agencies and academic institutions that face common research limitations. In doing so, this facility will establish an international reputation as a center for taxonomic excellence in plankton studies, and will be instrumental in training the next generation of marine taxonomists. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $9,420,000 (3 years) Annual Operation & Maintenance Cost (# years): $3,350,000/year (3 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The proposed center (a joint effort by USM's Dept. of Coastal Sciences and Dept. of Marine Science) fulfills multiple RESTORE and GoCoast priorities by building local expertise, creating partnerships, jobs and economic opportunities, facilitating ecosystem-based management, and promoting research and education initiatives. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This proposal provides a large economic stimulus to the region, and includes many opportunities for both short-term employment (e.g., design, surveying, preparation, and construction of a state-of-the-art science facility) and long-term career opportunities. Once operational, we anticipate the center to employ approximately 40 people from a wide range of educational levels, including positions in the following categories: administration, database and information technology, museum curation, plankton sorters and taxonomists, digital imaging technicians and analysts, and molecular and stable isotope lab managers and technicians, among others.	Jackson	Yes	No	Yes	80	Yes	No	No	No	No		$ 12,770,000.00	$ -	
	Workforce Development	1841	5/14/2014	Design and construction of overnight lodging and expanded dining capacity supporting the Marine Education Center	GCRL offers a range of over-night and short-term lodging for visiting scientists, and visiting teachers and students participating in the various programs offered by the Marine Education Center. In 2013, the availability of overnight lodging was a direct determinant of the number of participants in the Marine Education Center programs, as all available beds were filled. An ongoing economic feasibility study shows the potential for the MEC to increase its current participant numbers to double its existing capacity with the addition of appropriate lodging on the Halstead Campus. The additional of lodging at Halstead will support continued expansion of our summer field camps and teaching programs and will also provide additional capacity for conferencing and retreat programs for small science professional and academic groups. Additionally, several of the MECâ€™s educational partners have indicated a similar need for appropriate housing compatible with their program audiences. These partners include The National Park Service, The Grand Bay National Estuarine Research Reserve, the Pascagoula River Audubon Center, the Ocean Springs Chamber of Commerce, the Mary C. Oâ€™Keefe Cultural Center and the Walter Anderson Museum of Art. Partnering with these organizations provides additional housing markets and professional program growth opportunities. The construction project proposed will at accommodations for 80. The GCRL dining facility is equivalently taxed. Maximum capacity has been reached on a number of occasions in 2013. Expansion of the MEC program will require an expanded ability to feed participants commensurate with the expanded lodging capability on the Halstead Campus. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $3.345 million Annual Operation & Maintenance Cost (# years): GCRL manages its lodging on a cost recovery basis. Day rates cover custodial, power, water, sewer, maintenance/upkeep, and bedding/furniture replacement. No additional financial resources will be required to support the expanded lodging capacity. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects that lodging will provide a vehicle to dramatically expand (a) our Marine Education program, (b) the use of our facility to accommodate professional groups participating in retreats and think tank programs, and (c) expanded outreach partnerships with e.g., The National Park Service, The Grand Bay National Estuarine Research Reserve, and the Pascagoula River Audubon Center. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit USM to dramatically expand its Marine Education, outreach, and professional enhancement programs. These activities will expand the view of Ocean Springs and surrounds as a location for professionals to go, thereby promoting tourism pertinent to the Ocean Springs plan. The Marine Education program has a record of providing graduate students to USM; this will expand. The educational program is itself an important financial engine for the local community and for the university; this too will expand. â€f	Jackson	Yes	No	Yes	100	No	Yes	No	No	No		$ 3.35	$ -	
	Workforce Development	1843	5/14/2014	Development of an Aquacultured bait industry for Mississippi	The project will provide research, development, and technology transfer to develop an aquaculture-based bait industry for south Mississippi. Many recreational fishermen were severely affected by a combination of Hurricane Katrina, the BP oil spill, and increased fuel costs. Not only have many for-hire owners and operators lost their livelihoods, but so to have deck hands and live bait suppliers. To help alleviate these seafood related job losses, we propose to develop of an aquaculture-based bait industry in south Mississippi. We will do this through a three-stage approach, 1) research and development, (2) technology transfer through training, and (3) onsite extension assistance. Four species are targeted, each at a different point in the technical development. Bull minnows are the furthest along and stages 2 and 3 can be implemented immediately. Gulf white shrimp, blue crabs, and croaker all need some technology development before implementation of stages 2 and 3. Training of local commercial fisherman will be accomplished through the design and construction of demonstration systems for the rearing of bull minnows in ponds at the Lyman Fish hatchery, and bait shrimp, crabs and croaker at the Cochran Marine Aquaculture Center at the Gulf Coast Research Lab. Training will include: 1) design and function of ponds and closed-system components (how to build a system), 2) importance of appropriate filtration and a rudimentary understanding of the nitrification process, 3) water quality parameters and how to measure them, 4) â€œneed to knowâ€ facts about the biology of the species being cultured, and 5) trouble-shooting the system. Certificates of Completion will be awarded to program participants that complete the training course(s). In addition to the certificates awarded, a dedicated technical support person will work with interested individuals to help them modify and upgrade their facilities. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $1 million (2 yrs) Annual Operation & Maintenance Cost (# years): $1 million (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of an aquacultured Bait industry for Mississippi addresses economic development. The facilities for implementation of the program are already available and require only slight modifications to the ponds at the Lyman Fish Hatchery and the Cochran Marine Aquaculture Center. Once the program is fully implemented there will be a sustainable industry developed. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Construction will be minimal but the development of an aquacultured bait industry will yield substantial job creation and economic opportunities.	Jackson	Yes	No	Yes	50	Yes	Yes	Yes	No	No		$ 2.00	$ -	

	Workforce Development	1849	5/28/2014	Red snapper stock enhancement in support of the recreational fishery of Mississippi	Brief description of activities: GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species for enhancing native populations. GCRL is now poised to develop and apply new marine aquaculture technologies for red snapper in support of coastal restoration, economic expansion, and fishery stock enhancement. Red snapper is one of the most sought-after recreational fish. Reduced federal quotas have significantly impaired profitability of the recreational for-hire industry, with economic impacts throughout much of the tourism sector of the Gulf coast. GCRL is at the forefront of developing intensive recirculating aquaculture of red snapper for stock enhancement. In fact, GCRL is the only institution in the world doing so. Accomplishments include release of over 5,000 juveniles in 2013 in support of rebuilding red snapper populations; and development of copepod production technologies for feeding red snapper larvae. Building on those successes, GCRL is poised to increase production of red snapper in 2013 â€" 2014. Estimates based on NMFS SEDAR assessment growth and mortality schedules for red snapper indicate that the release of about 350,000 red snapper at 6-cm size (about 0.5 years old) would produce enough legal size fish (16 inches) in three years to double the 2012 landings recorded for Mississippi recreational fishermen. The GCRL aquaculture program has the capacity to achieve this level of production with improvements in culture technology. In 2011 (last year of NMFS data), Mississippi saltwater anglers spent $149 million in taking over 1.6 million angler trips in the three coastal counties. Thus, the recreational fishery is an important source of tourism dollars for the coastal counties and red snapper is an important draw encouraging anglers to the coast. Doubling the landings would add significantly to the tourism value of this sector. This project would focus on that goal. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 per year with a minimal duration of 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Thad Cochran Marine Aquaculture Center at GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species. The $30 million investment by federal and state partners in the nearly 100,000 sq. ft. of research and development facilities provides state of the art facilities. DMR has been a strong supporter and funder of aquaculture through the Tidelands program. This support is anticipated to continue to provide the basic research to support this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishery of Mississippi is an important component of coastal tourism. This project will substantively support expansion of this sector so damaged by the BP oil spill. Increased landings will result in increased jobs in the shore-based businesses supporting recreational fishing, and also in hotels and restaurants providing food and lodging for anglers coming down to the coast to fish.	Jackson	Yes	No	No		Yes	Yes	Yes	No	No		$ 10,000,000.00	$ -	
	Workforce Development	1855	6/3/2014	: Development of a recreational fishery initiative within SCeMFiS (Science Center for Marine Fisheries)	Brief description of activities: The Science Center for Marine Fisheries (SCeMFiS) is a National Science Foundation (NSF) Industry & University Cooperative Research Center (I/UCRC) housed at GCRL which provides academic resources to fishing businesses throughout the Gulf coast. I/UCRC centers are designed by NSF to provide the opportunity for the business community to obtain access to academic science to fulfill their needs. The mission of SCeMFiS is to utilize academic, recreational, and commercial fisheries resources to address urgent scientific problems limiting sustainable fisheries. SCeMFiS is a unique entity because it seeks to simultaneously achieve the goals of sustainable fish and shellfish stocks and sustainable fish and shellfish fisheries. The attainment of these dual goals of sustainable fish stocks and sustainable fishing industries requires a dual focus on (a) the assessment process that determines the status of the stock and (b) the regulatory process that provides the vehicle by which the fishery is managed to optimize stock status while supporting a robust industry. SCeMFiS is unique in being the only federal-industry partnership in fisheries science today that permits the fishing industry to retain a leadership role in designing the science program. This critical attribute assures that the goal of sustainable fisheries will remain a strong component of project design. More information on SCeMFiS is available on its website: http://www.SCeMFiS.org At present the recreational fishing industry is not represented in SCeMFiS because their organizations have not routinely been involved in the assessment process at the level that SCeMFiS intends to participate. Nevertheless, their needs are great â€" witness the disastrous state of the red snapper recreational fishery. This project will permit the recreational fishery to participate in SCeMFiS without the necessity of justifying a large financial commitment to their members, thereby permitting the recreational groups to get involved in the assessment initiatives that SCeMFiS will undertake. It is anticipated that once the value of the center is made clear through their participation, that the recreational groups will continue to participate using funds raised by them from their membership. The project will provide the opportunity for two for-hire groups and two private boat groups to participate for 4 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $100,.000 yearly for 4 years: total $400,000 How will this leverage with other RESTORE priority areas or non-RESTORE funds? NSF will fund SCeMFiS at $175,000 per year. The total SCeMFiS budget this year is about $500,000. SCeMFiS anticipates that this funding level will increase. In addition, SCeMFiS can apply for additional NSF funding to support specific initiatives and for funds to train undergraduates, graduate students, and returning military personnel. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishing industry is one of the most important sources of income for the Gulf coast. In 2012, Mississippi anglers completed 1.6 million angler trips and spent over $120 million dollars on the Gulf coast. Increasing fishing opportunities will increase both jobs and income within the fishing infrastructure of the Gulf, including for-hire vessels, bait shops, hotels. restaurants, etc.	Jackson	Yes	No	No		Yes	Yes	Yes	No	No		$ 400,000.00	$ -	
	Workforce Development	1864	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Water Quality Restoration Enchancement Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring both conservation and recovery are the components of this project. Stream restoration will enhance the quality of water in adjacent waterways in addition to detention ponds and overflow discharge outfalls located within the City. In conclusion, the project restores streams and drainage discharge areas to its original state with the addition of sediment traps which makes beneficial use of runoff.	Hancock	Yes	Yes	No		Yes	Yes	Yes	No	Yes		$ 1,688,000.00	$ -	
	Workforce Development	1865	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Bird Estuary and Nature Trail	By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plants and ultimately water quality. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	Yes	80	Yes	Yes	Yes	No	Yes		$ 5,720,500.00	$ -	
	Workforce Development	1866	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Marine Education and Recreation Restoration	This project consist of a marine education center, a 9 mile kayak route and a 1 mile hiking and biking trail that will provide marine education and restore nature recreation. Identifies cypress, tupelo gum, fresh water, brackish water, saline marsh, environment through education, information and monitoring stations at strategic locations along the 9 mile route. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	Yes	40	Yes	Yes	Yes	No	Yes		$ 1,370,500.00	$ -	
	Workforce Development	1867	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring conservation and recovery are the components of this project a byproduct that makes beneficial use of trapped sediment also allows public access. By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plans and ultimately water quality. By hardening the Bay of Saint Louis with oyster and clams water quality is improved, sea grasses will be reintroduced and erosion as seen in slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. This project consist of multiple activities that stimulate public interest and support as well as education and participation in recreation restoration, seafood production and water quality. In conclusion, the project restores streams and drainage to its original state with the addition of sediment traps which makes beneficial use of urbanized run off. The project also has build in monitoring stations that benefit growth and the City supports and embraces this project..	Hancock	Yes	Yes	Yes	80	Yes	Yes	Yes	No	Yes		$ 9,519,500.00	$ -	
	Workforce Development	1874	6/21/2014	COASTAL WATER GUARDIANS (an Education, Intern & Apprenticeship project)	This project involves education, research and internship opportunities for coastal high school, college and university scholars. For those enrolled in marine education programs, this would incorporate "hands on" opportunities. During the planning process, meetings will be held with coastal high schools and institutions of higher learning along the coast to determine how to incorporate the project in curriculum and to gain project approval from state and local educational authorities. The proposal includes Harrison, Hancock and Jackson counties. The project provides workforce development opportunities for low-income participants through apprenticeships. Stipends will be provided to learn the skills necessary to play an active role in the restoration and healthy sustainability of natural habitat and coastal waters. Many coastal residents still desire maritime occupations. Unfortunately, for the past several decades, such opportunities have become rare. This program would re-ignite such prospects and create opportunities to learn skills that could enhance employment opportunities, spur economic development, and sustain families along the coast. We should, and must provide an EQUAL OPPORTUNITY restoration, one that ensures ALL RESIDENTS a chance to benefit from the experience and knowledge gained through the recovery and restoration process. If restoration is to be preserved and maintained far into the future,it is imperative that our youth and young adults be educated and prepared to assume this task. Participation can begin as early as the 9th grade for students enrolled in Marine Biology or similar classes. Students enrolled in colleges or universities with Marine Biology classes and/or majors would also be eligible. Youth and young adults are the future stewards and keepers of our land, waters and other natural resources. Summer internships will include stipends to reward student success and provide economic relief. The component will also ease the school to work transition. Upon project approval, Visions of Hope would like to commence formal planning as soon as possible and arrange meetings to initiate the partnership agreement process. The organization"s overall role in this project would include, but is not limited to: COORDINATOR - arrange/coordinate meetings necessary for planning, implementation and monitoring; secure partnership agreements with the various educational and other entities; gather/maintain/disseminate statistical data OUTREACH - disseminate information regarding the project; aid in securing program participants EDUCATION - GED/ABE classes, money management classes The cost quoted below is an annual estimated projection related to Visions of Hope's planning role and basic workforce development skills only. ($250,000). This amount could change depending on meeting requirements and related costs such as transportation,lodging, food, etc. Internship/ apprenticeship costs are also not included.	Harrison, Jackson,	Yes	Yes	No		Yes	Yes	No	No	No		$ 250,000.00	$ -	

	Workforce Development	1876	8/1/2014	The Economic Impact of Alternative Numeric Nutrient Criteria on Mississippi Communities	*Project Partner - Mississippi Farm Bureau Federation* Research Goal The overall goal of this research is to better understand how Alternative Numeric Nutrient Criteria (NNC) can impact Mississippi (MS) communities. We include agriculture, urban storm water, septic, municipal wastewater, industrial and state resource agencies as the affected sectors in these communities. For each sector, the cost of adapting to a newly proposed NNC will be estimated. For example, we propose to estimate the cost of such standards upon the agricultural sector including, but not limited to, row crops, specialty crops, poultry, and cattle. Total costs will then be aggregated across sectors and a regional and state level economic impact analyses will follow. The NNC to be examined in this study have been proposed by the MS Department of Environmental Quality (MDEQ) under the Environmental Protection Agency (EPA) directives. Where possible, we primarily follow the methodology for estimating costs per sector under uncertainty as described by the Florida Water Quality Coalitionâ€™s 2010 study. Research Study Area The State of Mississippi (48,434 mi2) has nine major river basins with approximately 86,000 miles of streams draining directly into the Mississippi Sound and the Gulf of Mexico, the Mississippi River and the Tombigbee River (Figure 1).The basins of the Pearl and Pascagoula Rivers and the Coastal Streams represent 41% of the Stateâ€™s area and empty directly into the Gulf of Mexico off the coast of Mississippi (Figure 1). Livestock production is the most important agricultural activity in these areas. Nutrient and bacteria from animal wastes often get into the streams resulting in different water quality problems along the inland water bodies and the coastal waters. This entire area has been ranked nationwide in the top ten and top twenty areas in need of protecting water quality from manure nutrient contaminants (Kellogg, 2000). Mississippi State University Research Team James Barnes (PI) Assistant Extension Professor, Dept. of Agricultural Economics, Mississippi State University Matthew G. Interis (Co-PI) Assistant Professor, Dept. of Agricultural Economics, Mississippi State University	All MS Counties	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 739,478.00	$ -	
	Workforce Development	2047	8/1/2011	Coastal Preserve Management Needs	This project consists of updating survey data and boundary markings throughout the Coastal Preserves. Given the current size of the Coastal Preserves (37,000 acres) and the current cost of surveys on large undeveloped parcels (approx. $50 per acre), the basic budget for this work could exceed $2 million dollars by the time additional logistics for marine work are included. This project would resurvey and mark boundaries to federal standards. Project benefits would be as follows: a. This requested budget could fund surveys of approximately 40,000 acres of current and incoming Coastal Preserves lands. Using an average parcel size of 200 acres, this would mean approximately 2,400,000 linear feet of boundary needs to be surveyed and marked. This would create employment opportunities for local surveying contractors by providing roughly 6,000 man-days of work or approximately one year of work for 25 to 40 employees of Mississippi small businesses (surveyors). b. Many management techniques needed for maintaining the long-term health of the Coastal Preserves (such as prescribed fire) require that boundaries be-well established in order to avoid unintended actions on adjoining land. For example, adjoining land in silviculture may not benefit from the same type of burning required for ecological/habitat management, and any damage, whether real or perceived, could pose a potential liability for the State.	Hancock, Harrison	Yes	Yes	No		No	No	No	No	No	Yes	$ 2,250,000.00	$ -	
	Workforce Development	2073	7/8/2014	Small and Medium Business Entrepreneurship Training	Gulf Coast Business Partners will conduct 12 weeks of basic business training to small business along the MS Gulf Coast. The training will equip the small business person with the basic needs to sustain and grow their business. In addition to training participants will be matched will be matched with mentors. Gulf Coast Business Partners believes that strong partnership will encourage four strategic activities.. Training, Mentoring, Advocacy and Access to Capital...in order to walk alongside small and medium enterprise owners. Overemphasizing one activity or neglecting another makes for an unbalanced approach to sustaining and growth of business development.	Hancock, Harrison	Yes	No	No		Yes	Yes	No	Yes	No		$ -	$ -	
	Workforce Development	2075	7/18/2014	MS Observing and Modeling Restoration Network (MSOMRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€ capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Hancock, Harrison	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 47,000,000.00	$ -	
	Workforce Development	2076	7/23/2014	MS Living Marine Resources Restoration Network (MSLMRRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€ capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Mobile, Hancock,	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 49,000,000.00	$ -	

	Workforce Development	2085	7/30/2014	MS Habitat Characterization Restoration Network (MSHCRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Harrison, Jackson,	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 19,000,000.00	$ -	
	Workforce Development	2086	7/30/2014	MS Indicators of Stress Restoration Network (MSISRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Hancock, St. Tamm	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 7,000,000.00	$ -	
	Workforce Development	2104	4/1/2015	Conservation Demonstration Working Farm	Thanks to numerous conservation innovation practices, as stewards of the land we are doing a much better job than in the past. As urban sprawl and demands for our natural resources continues to increase, we need a forum to demonstrate these new conservation advances to the public. A working demonstration farm would not only benefit consumers of natural resources but also the producers of those resources and others. â€œThe Farmâ€‹would be utilized in multiple ways to exhibit conservation practices. Farmers would be shown cutting edge farming practices that would benefit the environment while at the same time benefitting their bottom line. Students will take advantage of the facility to better understand the native habitats and the methods that are being used to handle the growing use of them today. Schools will be able to expose children to where the food and fiber that they consume daily comes from and what it takes to get those products to them. Researchers will continue to explore new mechanisms that will aid in conservation. State and County officials can use the site to better understand the pleas of those who they serve. These are just a few of the services that â€œThe Farmâ€‹ could be of use to the public in its understanding of conservation. The CMSWCP would like the opportunity to establish a â€œConservation Demonstration Farmâ€The land would be acquired and the necessary infrastructure established. The locations would ideally consist of varied topography within a watershed basin close to a major waterways.	Harrison, Hancock	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -	
	Workforce Development	2128	9/25/2014	Impact of Suspended Sediment, Water Circulation, and Waves on Marshes and Oyster Beds	We propose to deploy four moorings equipped with a downward looking RDI WorkHorse Sentinel ADCP to measure the currents, Reynold stresses, and suspended sediment concentration (SSC), a Valeport MIDAS DWR Directional Wave Recorder, and four Sondes YSI 6600EDS to measure various parameters such as temperature, dissolved oxygen, salinity, turbidity, and chlorophyll at different depths. The moorings will be deployed for two years. They are placed at four locations for one year and then moved to another four locations for the second year. Guidance for these choices of mooring locations will be gained through application of the SWAN wave prediction model. The moorings will be placed near oyster reefs and/or marshes, preferably in water depths of at least 2 m. We plan to deploy moorings at healthy reefs or marshes and at unhealthy reefs or eroding marshes. Whether we choose reefs or marshes may depend on recommendations from the RESTORE council. If our mooring locations overlap with the moorings that are part of the â€œMississippi Coastal Observing and Prediction Networkâ€‹also submitted to the RESTORE council, we will consolidate instruments to reduce costs. To calibrate the SSC ADCP measurements, we will perform monthly surveys at each mooring. These cruises will also be used to maintain the moorings and replace the battery packs. We will measure conductivity and temperature with a lowered CTD and take water samples at various depths. The SSC in these water samples is measured using a filtration system. In addition we will collect bottom sediment cores during each survey to measure the grain size distribution and sediment properties in order to determine the critical shear stress needed for sediment resuspension. The currents recorded with the ADCP and the orbital velocities estimated from the wave heights will indicate how often these critical shear stresses are exceeded, and provide insight into the active governing processes. The sediment distribution, shear stress and moored time series gathered as part of this project will all be leveraged by the modeling efforts submitted separately to the RESTORE council as â€œThe Influence of River Plumes, Hurricanes and Storm Fronts on the Hydrodynamics of the Mississippi Bightâ€‹in that suite of model-driven investigations, coastal erosion and oyster bed viability were not focal points, so within this proposal our ROMS model implementation for MS will be expanded to handle wetting and drying (Warner et al., 2013), as well as wind-wave coupling and the sediment transport capabilities of the ROMS-based Coupled-Ocean-Atmosphere-Wave-Sediment Transport (COAWST) model system (Warner et al., 2010). The comprehensive set of in situ measurements will provide a rich data set that reveals key mechanisms associated with sediment loading within the MS, which will inform the development and validation of this near-shore model. With validated erosion and suspended sediment distributions, the model will be positioned to provide insight into oyster bed viability, marsh and barrier island erosion assessment, as well as key water quality constituents that directly contribute to marine ecosystem function. Deliverables include geospatially referenced sediment core, critical shear stress, time series of collected data and maps that indicate which marsh coastlines are most threatened and what locations may be most viable for oyster reefs.	Harrison, Hancock	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes		$ 1,640,000.00	$ -	
	Workforce Development	2129	9/26/2014	Quantifying Water Quality Using Remote Sensing for the Gulf of Mexico	Since this project is Gulf wide, was interested in being considered for Council funding; however, just implementing same proposal in MS waters would be a great benefit to DMR and DEQ's day to day operations. The proposed effort will address the RESTORE Council priority area â€œWater quality monitoring and improvement.â€The project will focus on establishing a time series (2013 â€“ 2017) of satellite-based water quality products with improved spatial and temporal coverage. Water quality improvements to be achieved include detecting and monitoring: a) coastal river and land discharge points and impacts to estuarine systems; b) spread and dissipation of point source discharges; and c) tracking water quality changes from river discharge. The project will provide for the efficient and effective direction of public resources for the purposes of protecting public and environmental health. Present water quality monitoring programs are limited in the spatial and temporal coverage and cannot rapidly address if abnormal water conditions are occurring. By combining with daily satellite properties this will be remedied and enable rapid assessment of atypical water quality evident with enhanced spatial extent. Decision makers will be provided a capability to respond rapidly and send sampling collection and clean up actions. By continually satellite monitoring the impact of cleanup activities can be confirmed that water quality has returned to normal conditions. Outcome from this project will be improved water quality management in areas along the gulf coast. Decision makers in each stateâ€™s environmental quality agency will have access to an automated web based decision aid that uses real-time satellite data with automated algorithms based in Best Available Science to facilitate critical decisions based on timely and accurate information. Please see detail proposal with description, benefits, and tentative Partners-- Proposal is scalable from just MS waters to the entire Gulf of Mexico.	Harrison, Jackson,	Yes	Yes	Yes	20	Yes	Yes	Yes	No	Yes		$ 12,000,000.00	$ -	
	Workforce Development	2133	10/1/2014	Surface Currents and Wave Monitoring for the Gulf of Mexico	The U.S. Gulf Coast is vulnerable to a variety of risks, including oil/contaminant spills, harmful algal blooms (HABs) and Vibrio, hurricanes, coastal land loss, and navigation accidents. Near real-time information on coastal ocean surface currents, waves and winds are an important element of a coastal ocean observing system necessary for mitigating these risks and for protecting public health and safety, emergency response, the coastal economy and sustainable use of coastal resources. This environmental intelligence, which can be gained through a system of coastal High-Frequency Radar (HFR) stations, can, for example: (1) Improve monitoring of restoration projects (sediment transport, water quality), (2) Help track spilled contaminants and Harmful Algal Blooms to protect public health, water quality, and critical habitats, (3) Help ensure safe commercial and recreational navigation, (4) Enhance search and rescue efforts, (5) Improve ocean and weather forecast models, including those for storm surge, (6) Enhance public beach safety through the forecasting rip currents, and (7) Enhance community preparedness for coastal land loss issues. This project meets the RESTORE Act Plan Comprehensive Plan priorities for habitats, water resources, living coastal and marine resources, natural processes and shorelines, and science-based decisions by developing a U.S. Gulf-coast wide network of High Frequency Radar stations to provide real-time monitoring of surface currents and waves in State waters. These stations are efficient, effective tools for meeting multiple public needs along the U.S. Gulf Coast. The proposal includes Project Management for the procurement, installation, and operation for these sites across the Gulf Coast. Also, includes Data Management for the design and integration to assure data meets all RESTORE-Act Policies and Procedures. Real-time distribution of these data to numerical models, and agency decision makers are included. An Outreach component is included to work with the Public and Agency Decision Makers, to assure the understanding and training is in place to integrate these user-friendly products in to day to day operations of each agency.	Hancock, St. Tamm	Yes	Yes	Yes	20	Yes	Yes	Yes	No	Yes		$ 20,000,000.00	$ -	

	Workforce Development	2139	10/6/2015	Reduction in post hooking sea turtle mortality	This proposal will develop new technology to reduce sea turtle mortality by developing methods to remove fishing line without removing endangered sea turtles from the water. This new method will be designed for inshore fishing from piers and bridges . The Endangered Species Act can shut a fishery down after a certain number of takes accure. The device I have designed will not require a fisherman to haul the turtle up in the air to the pier surface inorder to cut the line from the hook.. We will collect data and film our interactions with the device and the line. I will call IMMS to come collect the turtle. After proof it works as it should then we will share our information.!We will then do outreach and education to encourage the use of this technique by our Coastal recreational fishermen. This new technique will address the problems that our recreational fishermen are having in removing their fishing line from the turtles that they are interacting with while fishing in state waters. There has been increase interaction with these endangered species and this new technique will help with their protection. We will then be able to expand the use of this new method to other areas to help address their interactions with these endangered sea turtles. This device could be used as a midigation tool for a section 10 permit for the states. The data shows that these sea turtles die from becoming entangled in the line that was cut from the pole and left on the hook. A turtle can survive a hook but not fishing line. It causes them to drown and get infections. The new device would slid down the line and cut the line off at the hook without harming the turtle. This is a win for the turtle, the fishermen and the economy because our piers were not closed and I will supply as many as possible free to the states, the stranding team and fishermen. When this new technique is proven successful. A full report of the study and success of the new gear will be provided to All Gulf Coastal states and NOAA. This project will include providing new gear to be given to Mississippi recreational fishermen as long as the supply of gear is available in this pilot.	Jackson, Hancock,	Yes	Yes	Yes	25	No	Yes	Yes	Yes	Yes		$ 500,000.00	$ -	
	Workforce Development	2140	1/1/2015	Sustainable Gulf Coast Oyster Restoration and Coastal Protection using Central Oyster Hatcheries and Gulf State Remote Setting Sites	In the face of poor spat sets, low harvests and declining oyster populations, a new approach is needed to restore oysters and the communities that depend on them. We propose a comprehensive long-term oyster restoration plan that restores habitat, improves water quality, revitalizes the economy of the Gulf oyster community, replenishes living coastal and marine resources and enhances community resiliency by revitalizing the Gulf oyster industry economy. This will be accomplished by massively expanding regional oyster hatchery production capacity, establishing remote setting bases in each of the five states, working with state resource agencies in oyster restoration and stock enhancement and actively engaging university-based scientists in monitoring and adaptive management. This project will enhance and restore oyster populations throughout the region, providing significant ecosystem services (e.g., carbon sequestration, nitrogen removal, habitat for living marine resources and cultural) and encourage community resilience through long-term sustainable economic growth and job creation. The region-wide project will: 1. Use existing oyster hatchery capacity while conducting a rigorous site assessment (6 mos.) for a bio-secure mega-hatchery with the capacity to provide > 50 billion oyster eyed larvae/year (comparable to the worldâ€™s largest oyster hatcheries), with spawns specific to each state within 18 mos.; 2. Build dockside remote setting facilities in each state, capable of producing > 10 billion spat on cultch; 3. Enhance up to 180,000 acres over 9 yrs. with 500,000 spat on cultch/acre, deployed by state resource agencies; 4. Monitor the success rate through rigorous university-based monitoring program in each state, to guide state-specific adaptive management; 5. Increase the resilience of the system by adding a second bio-secure mega-hatchery in year 4; and 6. Support a long-term comprehensive regional strategic plan, evaluated by university-based researchers and resource agencies, for the industry. For this project, siting and construction of the first hatchery and the dockside remote setting facilities will be accomplished within 18 mos. Larval production will be supported for 9 yrs., with monitoring to occur during this time, with 90 billion juvenile oysters added to up to 180,000 acres of public oyster beds through the region. In addition to the potential job creation and economic benefits of the enhancement of oyster populations, this project will also provide critical ecosystem services through improved water quality, increased biodiversity, creation of more diverse habitat and cultural services provided by productive oyster reefs worth up to $200 million to harvesters annually; comparable to the value of the ecosystem services provided by the project.	Gulf of Mexico	Yes	Yes	Yes	28	Yes	No	Yes	Yes	No		$ 132,000,000.00	$ -	
	Workforce Development	2149	1/1/2015	Edible Forests of the MS Gulf Coast	This project will develop fruit orchards in every city and county in the three county of the MS Gulf Coast, Harrison, Hancock and Jackson counties. The Mississippi Urban Forest council will partner with our Tree City communities along the coast, local garden group and civic groups to develop the orchards. Training will be provided to citizens and those involved in the development of the orchards. Oversight for long term maintenance will be provided. Correct fruit varieties for the area, soils and climate will be taken into account for selection of species. This project will provide model orchards, encourage more local fruit production, provide education to implement sustainable orchards, improve healthy eating and provide sources of value added products for local citizens.	Jackson, Harrison	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 450,000.00	$ -	
	Workforce Development	2155	10/27/2014	Establishment of an Algae-for-Aquaculture Center for Mississippi	PI for this Project: Dr. Gordon Cannon, Vice President for Research USM The global population is rapidly increasing and is expected to surpass nine billion by 2050. As the population continues to grow, the ability for the world to feed itself will become increasingly more difficult. Environmental factors and limitations on water, land, energy, and other vital resources will further stress food production throughout the world. New technologies that do not compete with current human food production resources and processes are urgently needed to support the growing food demand. Fish are a major source of high-protein food, and the demand for fish is increasing world-wide at a rate approximately double that of population growth. The worldâ€™s oceans, however, cannot meet the increasing demand for fish, so aquaculture production must continue to expand to bridge the growing gap between what the oceans can provide and what the world demands. High-protein fish require high-protein diets, and fishmeal, the primary source of protein in marine speciesâ€™ diets, is in short supply given that it is derived from the worldâ€™s oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the worldâ€™s oceans and does not compete with terrestrial food production is urgently needed. Algae are a promising candidate for fishmeal replacement (some species have protein levels in excess of 60%), and the State of Mississippi has the climate and resources necessary to support efficient algal biomass production. Further, the University of Southern Mississippi (USM), through its Gulf Coast Research Laboratory (GCRL) and Thad Cochran Marine Aquaculture Center (CMAC) affiliates, has the marine biology and aquaculture expertise necessary to understand algal biomass utilization and to ultimately validate algae as a fishmeal replacement in future aquaculture feeds. General Atomics (GA) proposes to team with USM to establish an algae-for-aquaculture research center to demonstrate the value of algal biomass as a high-protein ingredient in future commercial aquafeeds. A research-scale algae growth facility utilizing GAâ€™s existing technology will be constructed at USM, on or near the grounds of the GCRL. Algae strains high in protein will be the focus for research. The facility will initially utilize algae strains provided by GA, but subsequent efforts will utilize local Mississippi algae strains, after suitable isolation and optimization at GA. The algal biomass produced will be used to conduct fish feed trials at CMAC using the substantial aquaculture research infrastructure already present as well as the cell biology, marine science, and analytical support capabilities of USM. The results of initial fish feed trials will be used to modify algal strain selection and/or algal growth parameters as required to improve the overall fish health and growth rate observed in subsequent feed trials. The program will also allow USM to establish an aquafeed formulation and feed production capability which bridges the gap between algal growth and aquaculture feed and will provide more timely response to feed variation requirements. The initial program is expected to run for 24-30 months. This will allow for construction and systemization of the algae growth facility and installation of the supporting analytical equipment and procedures, estimated to require 9-10 months, followed by operation of the facility for 15-20 months. After several months of algae growth, the initial algal biomass will be available for inclusion in feed formulations supporting fish feed trials. Fish species of interest include Sea Trout, White Sea Bass, Red Snapper, and Cobia. Additional feed trials will be conducted at prescribed intervals as additional algal biomass is produced. The goal will be to show that algal biomass-containing aquafeeds yield a final fish product with health, growth, and taste comparable to that produced with current fishmeal feeds. Proof of the value of algal biomass as a substitute for fishmeal will confirm the economics of algal biomass production and will enable the establishment of commercial-scale algae growth facilities within Mississippi and elsewhere in the U.S. and the world. The benefits to the State of Mississippi associated with establishment of an algae-for-aquaculture industry are many and include: (1) Establishment of a world-class algae-for-aquaculture research center at USM; (2) Establishment of a new high-tech farming industry that can be exported to numerous other areas in the U.S. and the world; (3) Development of new high-tech jobs associated with high-protein algae production, feed formulation and production, and aquaculture; (4) Utilization of the Stateâ€™s abundant natural	Jackson,Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 12,000,000.00	$ -	
	Workforce Development	2168	11/7/2014	Gulf of Mexico Education & Outreach: Training the Next Generation of Environmental Health Managers	In recent years, direct and indirect anthropogenic impacts on Gulf of Mexico, and the Mississippi Sound, coastal ecosystems have reached crisis levels. In addition to the recent oil spill, this region experiences nutrient enrichment and pesticides from agricultural run-off, metals and chemical pollutants from industrial discharge, and a variety of pharmaceuticals and personal care products from community wastewater. These multi-stressors emphasize that as stakeholders and future generations of scientists deal with these increasingly complex environmental issues, they will need training in novel interdisciplinary skills and perspectives that will enable them to tackle these issues in creative ways. Using the GOM as a natural laboratory, we will train graduate students in the varied effects of aquatic stressors using cutting-edge technologies from a diversity of scientific disciplines (i.e., Biology, Chemistry, Engineering, Geology, and Pharmacy), and we will apply these lessons to societal implications (e.g., Restoration Management, Law and Policy). The Environmental Toxicology Research Program [ETRP] at the University of Mississippi studies these issues using a variety of techniques including: 1) Biomarker studies [cellular/molecular processes], 2) Environmental Processes [organismal- to community-level organizational effects], 3) Fate & Transport [chemical analyses], 4) Risk Assessment, and 5) Environmental Remediation. We propose to develop an intensive summer â€œbootcampâ€ with broad training and multiple perspectives in these core research areas. Participants will receive training and mentorship from ETRP scientists, as well as collaborators in government and private industry laboratories to prepare them to deal with current and future GoM health issues. Specifically, we will recruit interested students (undergraduate, graduate and high school) and stakeholders from Mississippi communities for month long summer sessions divided between the UM Field Station (Oxford MS) and the MS coast. During the first third of the course, students will receive focused lectures and intensive â€œhands-onâ€ training in water quality analyses and biomarker surveys. The team will then drive to the Gulf Coast Research Laboratory where they will learn field monitoring procedures, and habitat remediation/restoration approaches. We plan to recruit 24 students into each of two summer sessions (i.e., June and July) for a total of 48 stakeholders trained each year. However, if funding will only allow a single cohort to be trained, the budget provided represents the aforementioned training for one month and 24 students only. This education and outreach program can stand-alone based on the efforts of the UM ETRP personnel and their collaborators, but we will attempt to leverage outreach opportunities with other funded Restore Projects to provide greater context for trainees. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No		No	Yes	Yes	No	Yes		$ 391,457.00	$ -	
	Workforce Development	2169	11/7/2014	Gulf of Mexico Health Assessment: Instrumentation for Environmental Monitoring	Marine coastal communities of the Gulf of Mexico, and the Mississippi Sound, represent important commercial fishery grounds, as well as habitats that support threatened species and provide essential coastal protection and recreation opportunities. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to the GoM have resulted in significant damage and loss of these critical ecosystems and the species they support. Thus, the management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. This requires cutting edge monitoring strategies that focus on measuring the concentrations of contaminants: 1) in local seawater and sediment, and 2) in species tissues. We propose to acquire two incredibly powerful monitoring instruments to enhance the existing University of Mississippi Environmental Toxicology Research Program [ETRP] resources. Specifically, we will upgrade our existing Gas Chromatography/Mass Spectrometer (GC/MS) to address contaminant concentrations in seawater and sediment at resolutions that are approximately an order of magnitude more sensitive than our current instrument. Likewise, we will also upgrade the ETRP Synapt proteomics mass spectrometer workstation to include a MALDI TOF interface to measure contaminants in tissues of affected species. While our current resources enable us to perform the studies proposed in other RESTORE proposals (PI: Slattery), these upgrades will provide state-of-the-art instrumentation for UM ETRP researchers, and will provide Mississippi resource managers access to sophisticated monitoring approaches that focus on the fate and transport of contaminants in the environment, as well as the stress responses of affected species in their entirety (i.e., the proteome). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	Yes	100	No	Yes	Yes	No	No		$ 400,000.00	$ -	

	Workforce Development	2176	11/11/2014	An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild shrimp fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild shrimp fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20- year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -	
	Workforce Development	2177	11/11/2014	An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild crab fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild crab fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -	
	Workforce Development	2178	11/11/2014	An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild oyster fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The oyster fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -	
	Workforce Development	2179	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program __x__ Workforce development _x__ Economic development ____ Eco-Restoration __ __ Seafood __x__ Other (Name): Tourism Brief description of activities: The tourism industry is known to be a significant component of the economic activity portfolio on the Mississippi Gulf Coast. One unique and significant aspect of the tourism industry in coastal Mississippi is the combination of a coastal environment and casino gaming. With limited resources, it is vital to invest in areas that yield the highest lifetime economic impact and to diversify where possible. However, there is no known comprehensive time-series assessment of the economic impact of tourism activities by sector in coastal Mississippi, nor is there any known collective effort to better understand who visits coastal Mississippi and why. The research project would model the economic impact of tourism activities annually over a ten-year period in coastal Mississippi and, subsequently, on the State of Mississippi. This project would also entail measuring behavioral perceptions and intent throughout this period. Among others, primary sectors in the overarching time series assessment would include casino gaming, beach and marine-related tourism, festivals and other annual events, eco-tourism, arts and museum tourism, sports tourism, and wildlife tourism. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Economic impact analyses will be conducted in the aggregate and by tourism segment to determine the effects on all sectors of the economy to include support amenities such as restaurants and bars, and hotels and lodging. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds?	Harrison	Yes	No	No		Yes	Yes	No	Yes	Yes		$ 15,000,000.00	$ -	

	Workforce Development	2180	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: Marine recreational activities are abundant on the Mississippi Gulf Coast, and this â€œblue economyâ€ is widely believed to significantly impact the local and state economies. However, there is no known comprehensive assessment of the economic impact of these coastal activities in Mississippi. Through extensive primary data collection, this research project would model the annual economic impact of coastal marine recreational activities over a ten-year period on both coastal Mississippi and the State of Mississippi. Activities in the annual assessment would include recreational fishing, onshore and offshore charter boating, big game fishing tournaments, recreational boating, and recreational activities on marine and inland waterways. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Annual economic impact analyses will be conducted in the aggregate and by activity segment to determine the effects on all sectors of the economy to include support amenities such as boat sales, bait sales, marine equipment sales, harbor revenue, etc. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $950,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority areas of Eco-Restoration, Economic Development, Seafood, and Tourism by measuring recreational monetary outcomes of our coastal natural resources and the blue economy. Specifically, this effort is based on the call for projects that provide â€œa direct impact on residentsâ€™ quality of lifeâ€ which is listed under Additional	Harrison	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 9,500,000.00	$ -	
	Workforce Development	2181	11/11/2014	Continuous record of water quality for evaluating restoration impacts (nutrients, trace metals, microbial communities and physical measurements)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. To deal with theses shortfalls, we have been developing and utilizing continuous fluid samplers (OsmoSamplers) for oceanic, estuarine, riverine, and land-based borehole research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing (Jannasch et al., 2004). Such systems have been designed for studies lasting days (samples every 15 minutes) to 5 years (samples every week). Samples also can be preserved in situ to stabilize dissolved metals, nutrients and microbial community structure (Robidart et al., 2013). We propose to deploy new state-of-the-art water quality monitoring systems that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. We move beyond standard nutrient measurements to included trace metals and microbes. Trace metals can be toxic and are mobilized by excretion of salt glands in Spartina alterniflora and contaminated and natural sediments the latter resulting from changes in redox state. Samples also will undergo standard microbial analyses with a particular interest in Ecoli, an indicator species for human health issues. However, the entire biome will be assessed because not much is known about the temporal aspects of microbial structure and function in these environments. We propose to deploy 4 units in representative environments within Mississippi Sound for one year. Each unit will be recovered and redeployed every quarter (daily record) during which a companion deployment of a week in duration will be deployed and recovered (Hourly record). Samples will be analyzed at UM and other universities (e.g. USM). Fabrication, deployment, recovery, and analytical costs are estimated at $380K with university overhead.	Jackson,Harrison	Yes	Yes	No		No	Yes	No	No	No		$ 380,000.00	$ -	
	Workforce Development	2182	11/11/2014	Continuous Monitoring of Subsurface Water Quality (Nutrients, Metals, Salinity, Pressure) using Piezometers (Boreholes)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Within marsh environments nutrients and availability of water affect plant zonation as a function of competition, physical stress and nutrient limitation. Therefore, continuous monitoring of these constituents is essential for restoration projects in Mississippi Sound to understand the temporal aspect of water quality before and during restoration projects and to elucidate the effect of tidal forcing on the subsurface environment. For example, temporal monitoring within sandy march and coastal aquifers show a tidal influence on nutrient consumption and microbial productivity within the system (e.g., Sansone et al., 2008). We propose to deploy novel sampling and sensor capabilities in peisometer (boreholes) within and near restoration projects to monitor nutrient, trace metal, salinity, and water level in the subsurface. Such data will provide an indication of water flow, availability of fresh water, the transport and consumption of nutrients, and the mobilization of metals in response to changes in redox state and productivity of microbial communities within sediment. This proposed work goes beyond standard analyses to include trace emtals because mobilization of urban and industrial sources of trace metals (e.g., Fe, Mo, Cu, Cr, Pb, Zn, Cd, and Hg) through natural redox changes can reach concentrations that are detrimental or toxic in tidal creeks, watersheds, and in the subsurface. The novel system that we propose to deploy couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrient and trace metal concentrations. OsmoSamplers are continuous fluid samplers that have been utilized for oceanic, estuarine, riverine, and land-based borehole and piezometer research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing. The slow pump rate and small bore result in plug flow, minimizing dispersion (Jannasch et al., 2004). Such systems have been designed for studies of days (samples every 15 minutes) to 5 years (samples every week) and can be designed to preserve samples in situ for later laboratory-based analysis of dissolved metals. We propose to deploy 4 units in representative environments within Mississippi Sound proposed restoration projects for one year. Each unit will be recovered and redeployed every quarter (daily record) during which a companion deployment of a week in duration will be deployed and recovered (Hourly record). Samples will be analyzed at UM and other universities (e.g. USM). Fabrication, deployment, recovery, and analytical costs are estimated at $280K with university overhead included.	Mobile,Jackson,Ha	Yes	Yes	No		No	Yes	No	No	No		$ 280,000.00	$ -	
	Workforce Development	2183	11/11/2014	RETINA: A K-6 STEM (Science, Technology, Engineering, and Mathematics) Program for Mississippi	Restoration and monitoring projects in Mississippi Sound require STEM (Science, Technology, Engineering, and Mathematics)-trained personnel and a community that appreciates the benefits of a healthy ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of proposed restoration projects. To address these deficiencies and to position Mississippi for the future we need to develop a childâ€™s capacity to develop theory-based learning, which is inherent and can be fostered by promoting curiosity and by exposing them to a spectrum of experiences. Such experiences play a vital role in achieving proficiency in science understanding, but unfortunately, a myriad of budgetary and socioeconomic reasons limits opportunities for youth, leaving many economically disadvantaged students trailing in STEM fields (NRC, 2007). To meet these challenges The RETINA Program provides schools with a cost-effective and administratively beneficial way to broaden the scope of student exposure through its STEM curriculum. The RETINA Program is a 50-minute per day program that lasts 5 days. The Program blends formal classroom instructional activities with hands-on, skill development in a team-based setting conducted by the teacher and guided by national science standards that are set for each grade (e.g., ecology and water quality). There are four different activities per grade that are presented during the first four days. Activities are chosen with the intention of integrating technology under the umbrella of a scientific process and are designed to provide consistency and a continuum of difficulty among the grades. The program focuses on interactive participation in the design and development of simple robotic and sensor systems, providing a range of challenges to engage all students through project-based learning and provide a medium for communicating interest, experience, and challenges on the fifth and final day of the program. The RETINA program has been designed, modified, and tested in several diverse schools in California and Vermont. It is now posed to expand. Because RETINAâ€™s hands-on activities require (1) components that may be prohibitively expensive in todayâ€™s educational fiscal climate, (2) secure storage space, and (3) technology-savvy individuals to maintain systems, the RETINA Program is designed as a traveling program that gives many students access to the same resources. We propose to (1) supply two towed cargo vans with all of the materials necessary for teachers to conduct the educational modules, (2) provide educators with program materials (lesson plan, PowerPoint presentations, homework, instructional videos, and images) and STEM professional development sessions, (3) introduce the RETINA Program within school systems to engage students, and (4) organize a community service organization to provide technical and logistical support to maintain and refurbish modules and to transport cargo vans from school to school. Each van will be loaded with modules to accommodate 5 different classrooms per grade for each of the K-6 grades at a particular school. Given a week-long program, one cargo van can reach ~20 different schools per year (10,000 students). With the two vans proposed herein the cost per student reached per year is <$1, based on an initial cost of $570K (2-yr award). Future costs to maintain and transport systems can be as low as ~$10K for each cargo van per year (<$0.05 per student) and supported by a community organization. Additional vans and professional development can be added to reach each of the 447 elementary schools in Mississippi.	Pearl River,Washir	Yes	Yes	Yes	20	Yes	Yes	No	No	No		$ 570,000.00	$ -	STEM Curriculum

	Workforce Development	2188	11/11/2014	Sub-bottom profile, sediment characteristics, and mapping of the shallow (<3m) water portion of Mississippi Sound aided though the use of autonomous surface boats	Critical to all four of the proposals that will be submitted by Mississippi to RESTORE is the need to know the water depth (bathymetry) and subsurface composition in Mississippi Sound (e.g., mud, sand, hard substrate). More than half of Mississippi Sound is <3m deep, restricting navigation to small, low draft vessels and severely limiting the swath width of multi-beam sonars that are typically used to map the seafloor. Even shallower are the many sites that harbor eel-grass, submerged aquatic plants, and future sites for restoration projects. While airplane-based LiDAR has been used to map shallow coastal zones, this technology is limited when waters are not clear, is expensive to conduct, and does not provide a context for subsurface type and structure. We propose a solution to this problem that affords an expansive mapping program for these shallow water areas with the resolution necessary to track temporal changes in seafloor relief and to discern substrate structure and type. To compete such operations we propose to use a fleet of autonomous instrumented (e.g., single beam sonar, navigation and communication hardware) surface boats (kayaks) that is responsive to a manned boat (e.g., Boston Whaler) with a multi-beam system and a sub-bottom chirp sonar. This automation exists (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and has been expanded upon for gradient following (e.g., Adamek et al., 2013). Multi-robot systems offer many advantages over a single system, including redundancy, coverage and flexibility. One of the key technical considerations is coordinating individual units. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation using the cluster space control technique. These ASVs are monitored by a centralized controller, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust spacing based on visual cues and bathymetric data that are relayed from the ASVs. Thus, our cluster space control approach allows one to get the best quality data in an unknown/varying seafloor terrain. Furthermore, the manned presence provides a measure of quality control for the multi-beam system and chirp sub-bottom sonar on the command vessel. We propose to fabricate 8 autonomous systems boats that will respond to a master computer on a command ship. Specifically we will use a Boston Whaler with pole mounted multi-beam and sub-bottom profiler sonars to tow the fleet of ASVs to the sites of interest. There the ASVs will be initiated and follow in formation behind the command boat. We will use Mokai â€œjet-poweredâ€kayaks at a speed of 10 knots (they can go 20 knots for 8-10 hours) and lease a Boston Whaler for the command vessel. With side-by-side ASV operation with 10 meter spacing and at 10 knots, we will be able to cover 1.5 km2/hr or 14 km2/day (3,300 acres). This will provide a bathymetric map with centimeter resolution, characterize sediment type, and provide an indication of subsurface stratigraphy. Each kayak will cost ~$19K to purchase, instrument, and integrate with the aid of a graduate student, engineering technical support, and a small operational team. These kayaks will be integrated into the command structure during Year 1. For Year 2 we propose 20 days of operation in Mississippi Sound to cover (~75,000 acres or 117 square miles). The total cost of the preparing the vehicles in Year 1 and operating them in the field for 20 days in Year 2 is $650K, but will provide 117 square miles of data in a GIS format that can be revisited yearly at a much reduced cost to monitor changes in bedform to establish depositional and erosional rates within Mississippi Sound. Kitts, Christopher A., and Ignacio Mas. "Cluster space specification and control of mobile multirobot systems." Mechatronics, IEEE/ASME Transactions on 14.2 (2009): 207-218.	Jackson,Harrison	Yes	Yes	Yes	20	No	Yes	Yes	No	Yes		$ 650,000.00	$ -	Equipment development and purchase
	Workforce Development	2189	11/12/2014	Development of a Statewide Engineering Innovation Program for Marine Science Applications in Support of Mississippi Sound Restoration Projects	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€ However, the number of trained engineers from institutions of higher learning that have a understanding of the challenges associated with working within the marine sector are insufficient and donâ€™t meet community needs. For example, remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). We propose to make an investment in the education of engineers at the college level within the state of Mississippi, by exposing students to challenging engineering applications in the marine world, thereby opening the door to a plethora of potential careers. To accomplish this feat we will team up with Dr. Chris Kitts, Associate Dean of Research and Faculty Development, School of Engineering, Santa Clara University, who is funding by the Kern Family Foundation to develop a multi-institutional, cooperative, engineering program in which teams of students engineers and mentors design and fabricate instruments, platforms, and/or sensors. These products are integrated among the various university-based teams to complete a specified task that accomplishes a scientific goal. This successful and long-standing program incorporates a doæn universities in the Midwest, where the Kern Family Foundation wants to make a difference. Building upon this successful program, we propose to a similar program within the state of Mississippi to integrate each of the schools of higher learning with an engineering program. The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for different sensors, vehicles, or platforms that will be developed at each of the participating universities. Student teams will design, fabricate and test their system in context of design criteria. This work will culminate with the teams meeting at the Gulf Coast Research Laboratory in Ocean Springs, MS. Each team will then participate in the mission to collect data for restoration projects. The cost for this program is $160K per year with half of the funds being spent on materials/travel/sensors for engineering teams and the remainder for coordination and science outcomes. Potential Year 1 projects could include, for example, the development of autonomous surface vessels for water collection, preservation, and sensing â€" the initial project will depend on the amount of money available and current restoration projects.	Hancock,Jackson	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 160,000.00	$ -	Curriculum development
	Workforce Development	2190	11/12/2014	Purchase and Sea Trials of a 4000-m Capable Remotely Operated Vehicle for Marine Science Discovery and Experimentation	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€ An example of the growth in the marine sector is the expectation that remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). However, no deep-water ROV systems for marine science are based in the state of Mississippi or in any of the five states that border the Gulf of Mexico. We propose to make an investment in the infrastructure of Mississippi Marine Technologies though the purchase and sea trials of a 4000-m capable remotely operated vehicle (ROV). The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for an ROV that will be suitable for scientific operations within the Gulf. Upon delivery of the ROV, the NIUST team will subject the ROV to sea trials and design and fabricate the various tools that will be needed for scientific discovery and experimentation. The cost for such a vehicle would include a tether, winch, and tether management system, control van, and supply van. The vehicle would have 2 seven-function manipulators. The cost for this the design, purchase, and sea trials is ~$5M and would take 3-4 years to complete the final integration of systems for ocean operations.		Yes	Yes	Yes	100	Yes	Yes	Yes	No	No		$ 5,000,000.00	$ -	Equipment development and purchase
	Workforce Development	2192	11/13/2014	Bayou Bernard Industrial Expansion	The Harrison County Development Commission (HCDC) has 34 acres of land for development remaining in the Bernard Bayou Industrial District (BBID). To augment the amount of developable land, HCDC is requesting funding to expand Intraplex 10 area in BBID by 72 acres. This acreage is located west and adjacent to Intraplex 10 and is presently set aside for wetlands conservation. Utilizing funds provided by the RESTORE Act HCDC would allow for the purchase of necessary credits to mitigate the property and perform the necessary site preparation for immediate development.	Harrison	Yes	No	No		Yes	No	No	No	No		$ 6,000,000.00	$ -	
	Workforce Development	2193	11/13/2014	Mississippi Gulf Coast Marketing Campaign	The Mississippi Gulf Coast was hard hit by the 2010 Deepwater Horizon Oil Spill. While media reports and studies have centered on the environmental impact on the Mississippi Gulf Coast, we should not forget the economic impact that the spill had on the region. To that end, the Harrison County Development Commission (HCDC) is requesting $500,000 to develop a marketing campaign to be managed by the Mississippi Gulf Coast Alliance for Economic Development. Funding would provide for staff to lead the effort and would be housed in HCDC owned office space and marketing activities (eg. commercials, advertisements, etc.)	Harrison	Yes	No	No		Yes	No	No	No	No		$ 500,000.00	$ -	
	Workforce Development	2194	11/13/2014	North Harrison County Industrial Complex	The Harrison County Development Commission is requesting $4 million to assist with development costs associated with the North Harrison County Industrial Complex. The 623-acre site is located to the west of the U.S. 49 corridor linking Gulfport and Hattiesburg. To date approximately $11 million has been invested in the property to increase the number of developable acres under the management of the Harrison County Development Commission (HCDC). While the site is nearing completion additional work is needed. To make the site more marketable for large scale development an additional road is required, water and sewer must be extended to individual lots and surrounding wetlands must be mitigated.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No	Land Mitig	$ 4,000,000.00	$ -	
	Workforce Development	2198	11/13/2014	West Harrison County Business Incubator	The Harrison County Development Commission (HCDC) is requesting $700,000 to construct a Small Business Incubator to be located in the Long Beach Industrial Park. This new facility would be operated in conjunction with The Innovation Center located in Biloxi. Since 1990, the Innovation Center has encouraged the development of small start-up businesses by offering entrepreneurs lower operating costs and the training needed to successfully interact in the business world. The current facility has been operating at ninety-five percent for the past three years highlighting the need for an additional facility.	Harrison	Yes	No	Yes	100	Yes	No	No	Yes	No		$ 700,000.00	$ 80,000.00	
	Workforce Development	2199	11/13/2014	BBID Bulkhead	Project Description The Harrison County Development Commission (HCDC) will construct a 950â€™ bulkhead and dock facility in the Bernard Bayou Industrial District (BBID) for companies requiring access to the BBID Industrial Seaway. The BBID is the largest industrial park in Harrison County serving over 200 companies that employ 3,000 people. The bulkhead will offer docking facilities for marine activities including boat building and repair, marine construction and other companies traversing the Intracoastal Canal and the deep waters of the northern Gulf of Mexico. Purpose of Grant Funding Continued development and economic growth of the BBID is a high priority to the Commissioners of the HCDC. The purpose of the project is to prepare a shovel ready site offering immediate access to the BBID Seaway. The 34 acre site will allow the HCDC to successfully recruit new capital investment and jobs to Harrison County. It will increase the multimodal activity for companies requiring motor freight transportation and traffic on the intracoastal and inland waterways. Marine related support services such as machine shops, construction material suppliers and equipment maintenance mechanics will directly benefit from new marine related development on the Seaway. Project Benefits -Increased capital investment in real and personal property -Higher paying jobs requiring higher skill sets -Project ready site providing immediate access to the Seaway -Site is located in a fully developed Industrial Park providing all necessary infrastructure -Provides further stabilization of the bank adjacent to Gulf Ship - one of Harrison Countyâ€™s largest employers Project Cost -$4,100,000 to include: bulkhead, dredging, site preparation, fill, engineering -Requested Amount for Grant Funding: $4,100,000 Project Support	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 2,000,000.00	$ -	

	Workforce Development	2201	11/13/2014	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems Project Overview and Rationale Testing and validating new environmental monitoring technologies to enable long-term land use planning, management, and sustainability of coastal resources is a foundational precept of community resilience through ecosystem preservation and restoration. Protecting these coastal resources which provide critical ecological services to the communities along the Mississippi Gulf Coast in terms of buffers against storm surge and sea level rise requires long-term dependable, detailed, and proven information to make decisions that affect restoration and preservation outcomes. The National Oceans and Applications Research Center (NOARC) is focused on developing, testing, and validating the commercial applications of environmental monitoring technologies and the information they provide to address Mississippi restoration objectives while enhancing the long-term economic sustainability of this expanding geospatial information industry on the Mississippi Gulf Coast. Expansion and sustainability of this industry and its long term benefit to ecosystem restoration is currently inhibited by inconsistent means to calibrate and validate the basic data sets that underpin the derived resource management information. Scientific sampling designs to determine ecosystem restoration trends and quantified geospatial frameworks to make informed restoration investment decisions are critically dependent on calibrated and quantified data sets of known positional, spatial, spectral, and radiometric resolution. Replicable, calibrated data is the fundamental requirement for measuring spatial and temporal trends in coastal ecosystems that address long-term adaptive management alternatives. This proposal addresses the fundamental requirement for quantified data and geospatial information products by Federal, State, NGO, and private organizations focused on wetland restoration and sustainability. In addition, the long-term viability of this growing environmental monitoring service industry on the Mississippi Gulf Coast is also dependent on proven, demonstrable data and information product performance. The NOARC team will provide a comprehensive test range comprised of calibrated and instrumented target sites as well as highly instrumented and surveyed ecosystem reserves to Mississippi companies and universities to validate data products and derived geospatial information. The Mississippi Proving Ground will provide a unique, competitive edge to our companies and universities as they fully demonstrate and prove new monitoring technologies and information products to broader national and international markets. â€¦ Opportunity The market is currently exploding in low cost environmental monitoring technologies including commercial small satellites, unmanned air vehicles (UAVs), and autonomous maritime vehicles operating on and below the surface. To reduce vehicle cost, weight and power requirements, these platforms typically omit on-board calibration equipment. Therefore, the only way environmental data streams from these platforms can be validated and calibrated is through well characterized, calibrated, and instrumented ground-based test ranges. This proposal addresses this requirement by providing the means for Mississippi companies to enter the market with proven and tested information products and platforms. At the same time a well characterized, instrumented test range is aligned with RESTORE objectives focused on sustainable wetlands and resilient communities. The natural ecosystem component of this range will be used as the reference condition for conducting trend analyses on wetlands undergoing restoration and to aid in reporting long-term outcomes of restoration. In addition, the natural ecosystem test sites will be used to develop quantified sampling and monitoring techniques to determine long-term health and condition of wetland habitats including changes in areal extent, species composition, and competing land uses.	Hancock,Jackson	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 2,500,000.00	$ -	
	Workforce Development	2206	11/13/2014	Beatline Road Widening and Expansion	The Harrison County Development Commission (HCDC) is requesting $20 million to fund the widening and extension of Beatline Road in the City of Long Beach from two lanes to three lanes. Beatline Road presently runs from the CSX Rail Line north to Interstate 10 and services the Long Beach Industrial Park, as well as, being the primary evacuation route for residents in west Harrison County. After construction, Beatline Road will extend to U.S. Highway 90, which will allow for the movement of vehicles from the beach to Interstate 10. In its current condition Beatline Road hinders the ability of HCDC to adequately market the Long Beach Industrial Park to prospects requiring the movement of large trucks from the industrial park to Interstate 10.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 20,000,000.00	$ -	
	Workforce Development	2209	11/13/2014	Harrison County Revolving Loan Fund	The Harrison County Development Commission (HCDC) is requesting $25 million to fund the creation of the Harrison County Revolving Loan Fund. The revolving loan fund (RLF) will be a gap financing measure primarily used for development and expansion of businesses. It will be a self-replenishing pool of money, utilizing interest and principal payments on old loans to issue new ones. The establishment of a RLF will provide access to a flexible source of capital that can be used in combination with more conventional sources. It will also provide a bridge between the amount the borrower can obtain on the private market and the amount needed to start or sustain a business. Eligible uses for RLF loans include: â€¢Operating capital â€¢Acquisition of land and buildings â€¢New construction â€¢Building renovation , and â€¢Machinery and equipment.	Harrison	Yes	No	No		Yes	No	No	No	No		$ 25,000,000.00	$ -	
	Workforce Development	3213	11/14/2014	University and College Volunteers for Restoration Projects	Community Collaborations International will deploy teams of university and college volunteers from around the country to participate in a week of service devoted to giving a boost of youthful energy to community based organizations supporting children, families, and the environment on the Gulf Coast. Community Collaborations International began working in the Gulf Coast ten years ago recruiting and organizing teams of college volunteers to assist with Hurricane Katrina recovery efforts. Since then, we have returned every year building relationships and a continuum of sustained impact in the region. Volunteer teams will coordinate their efforts with organizations such as the South Mississippi Land Trust, Audubon Society, Horticulture for Humanity, Gautier Parks and Recreation Department, Mississippi Department of Marine Resources, Boys and Girls Clubs of the Gulf Coast, Gulf Islands National Seashore, Renew our Rivers, and many more. Based on prior year results, we expect 30 universities and colleges to participate resulting in between 400 and 600 volunteers primarily during the month of March. 400 volunteers each committing to a full week of service results in over 12,000 hours of much needed support for community organizations! These students have made a commitment to spend their spring break week focused on meeting the needs of Gulf Coast communitiesâ€¦they work hard and get the job done.	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes		$ 410,000.00	$ 360,000.00	
	Workforce Development	3223	11/15/2014	Understanding the Economic Linkages Between Coastal Restoration and Community Recovery from Damages Associated with the Deepwater Horizon Oil Spill	Background The Mississippi State University Center for Urban Rural Interface Studies (CURIS), holds a mission to provide a clearinghouse of information regarding community socio-economic profiles, changes in land use, community resiliency, economic and disaster preparedness, and economic impacts of natural and technological disasters. Founded in 2005 just prior to Hurricane Katrina, CURIS was funded by the U.S. Department of Commerce through a project titled â€œMitigating Coastal Development Impacts in Rural Communities in the Northern Gulf of Mexico Region: Establishing the Center for Excellence in Coastal Resource Management.â€ The Deepwater Horizon oil spill disrupted the Gulfâ€™s economy, damaged fisheries and critical habitats. In order to understand the magnitude of the Economic Impacts of Deepwater Horizon Oil Spill to the different economic sectors affected, multi-year baseline economic information about each sector was compiled from various secondary sources. Response to disaster fails for a number of reasons including lack of communication between adjacent communities, community officials, state, local and federal officials, relief organizations, and the public. Additionally, prior planning was inadequate. Research that helps communities integrate and strengthen responses will result in better preparation for both predicted and unforeseen disasters and provide necessary short-term responses for those events. In addition to continuing the regional work of the Center, we also propose to strengthen its programming by developing a tool to aid communities in planning for and responding to disasters, regardless of origin. The strategy will be called COAST Growth (Coordinated Organizational Assessment of Strategic Technology). We propose to use a Systems Analysis approach borrowed from engineering to examine how communities on the Mississippi Gulf Coast responded to Hurricane Katrina as a unit. Common processes or redundancies would be determined, and ways to integrate and strengthen processes would be developed. This data could then be used to develop a coordinated approach for other closely associated communities to use for disaster response. This could be used as a community planning, training and response tool. Results from this initiative will reduce money spent by state and local governments for infrastructure related to closely associated communities by targeting commonalities that can be exploited and differences that require closer attention. It also has the potential to mitigate damages from future disasters, regardless of origin, by providing information to aid in all levels of preparedness and response. Project Proposal This proposal will involve the following components â€“ â€¢Research on the long-term economic impacts of the oil spill to coastal counties â€¢Research on economic recovery of the coastal counties â€¢Research on linkages between coastal restoration and economic recovery â€¢Community outreach involving the economic implications of coastal restoration projects	Hancock,Jackson,H	Yes	No	Yes		Yes	Yes	Yes	Yes	Yes		$ 467,187.00	$ -	
	Workforce Development	3226	11/15/2014	Autonomous boat for routine monitoring of water quality (nutrients, trace metals, microbial communities and physical measurements) in Mississippi Sound	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. In a separate propose we presented the idea of using continuous fluid samplers in fixed (Eulerian) locations to monitor water quality using a system that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. This provides the ultimate record at fixed points. However, for some monitoring needs there is the desire for a larger spatial coverage (or Lagrangian distribution) and the need for larger volume samples for additional measurements. To meet this need we propose to develop an autonomous surface boat that is instrumented with physical and chemical sensors and capable of collecting up to 48 (500 ml) samples that can be preserved autonomously in the field. Such automation exists for science-based surface craft missions (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and is well suited for operation within the shallow, but busy waters of Mississippi Sound. The benefits of an autonomous boat are many. The boat can be (1) launched and programed by one person, who can monitor the boat locally, with others monitoring results using a web interface from their offices scattered about the state, (2) limits liability by taking the human out of the element while allowing the human to monitor obstacle avoidance sensors and other tracking and sensor systems. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust operational parameters Specifically, we will use a Mokai â€œjet-poweredâ€kayaks with a cruising speed of 20 knots. This kayak will include navigation, communication, obstacle avoidance, physical and chemical sensor, and sampling systems. The science package will include a single beam sonar, CTD, multi-spectral fluorometer, nitrate analyzer, dissolved oxygen and pH sensors, turbidity, and fluid sampling systems. The fluid sample will be a â€œMcCleanâ€style sampler that is capable of collecting 48 discrete samples that can be filtered in-line and immediately preserved if desired.	Hancock,Jackson,H	Yes	Yes	Yes	20	Yes	Yes	No	No	No		$ 530,000.00	$ -	Proposed Research Developement

	Workforce Development	3230	11/16/2014	Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project are: 1.Understanding Stakeholder Beliefs and Perceptions: The First Step toward Effective Engagement, Awareness, Outreach, and Policy Development To formulate effective engagement, outreach and educational programs requires an understanding of the underlying beliefs and values of various target audiences. Every individual, every community, and every culture has a set of beliefs and values that guide decision-making. Through the use of social science survey instruments, the underlying beliefs and values of selected target audiences will be surveyed at the local and regional scales to serve as a basis for effective engagement, technology transfer, education and outreach through the expanded Coastal REACH Program and to serve as a reference to gauge the effectiveness of these efforts. This information should also be very useful to the RESTORE Council as it considers project selection and evaluation. 2.Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities Social indicators are measures that describe the context, capacity, skills, knowledge, values, beliefs, and behaviors of individuals, households, organizations, and communities at various geographic scales. Social indicators are typically used to assess current conditions or attainment of social goals related to a variety of applications. Building upon Project 1 (described above), this project will identify and define social indicators that can be used to guide and incrementally evaluate habitat and water quality restoration and protection projects developed to implement the RESTORE Councilâ€™s Comprehensive Plan. The indicators can also be leveraged to serve as a common reference to evaluate the success of individual coastal watershed restoration and protection projects. This foundational project will be designed to support and evaluate many of the activities and projects facilitated by the RESTORE Council by addressing the societal dimensions inherent in the Councilâ€™s Comprehensive Plan. A wide range of questions exist that, if answered and monitored, could help the RESTORE Council achieve the success that it desires, such as: What constitutes project success from a societal standpoint? What expectations do different types of stakeholders have? What types of projects are desired geographically? What information is needed to inform stakeholders and where is it needed? How effective are education and outreach activities? What can be done to improve these efforts? What are stakeholders saying through social media? Starting with analysis of the input generated through local stakeholder meetings facilitated by RESTORE Council members that influenced the Councilâ€™s approach; to developing social metrics; to conducting baseline assessments; through incremental monitoring as projects are conceptualized, implemented, and completed; the objectives of this project could provide great benefit during planning, implementation and evaluation of many, if not most, of RESTORE Council projects and activities. This project was created to offer significant advantages to the RESTORE Council to assist in implementation of its Comprehensive Plan. This concept: 1.Can support all five of the RESTORE Councilâ€™s goals and other engagement, research, technology transfer, education and outreach needs;	Hancock, Harrison	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 3,200,000.00	$ -	
	Workforce Development	3231	11/16/2014	Regional Coastal Land Grant University and Extension Initiative: Disseminating RESTORE Council-facilitated Coastal Restoration and Protection Projects, Activities, Outputs and Outcomes through Annual State-wide Conferences, Gulf-wide Summits and Extension	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project concept are: 1.Establishing a structure and processes for regional collaboration among Gulf of Mexico land grant universities and their coastal Extension programs to foster a consistent Gulf-wide approach that leverages Extension activities and capabilities to support the engagement, technology transfer, education, outreach and extension priorities of the RESTORE Councilâ€™s Comprehensive Plan. 2.Disseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€" from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Extension Service. The Smith-Lever Act of 1914 established the Cooperative Extension System, a publicly funded, informal educational system that links the U.S. Department of Agriculture, the land grant university system, and individual counties. Extension, as the off-campus educational arm of land grant universities, has a large footprint in each state with offices in all or most counties and trained staff to provide community education and outreach in multiple disciplines. Extension's overall purpose is education. Its unique interdisciplinary perspective enables the organization to make a real difference through the provision of research-based information, educational programs, and technology transfer focused on issues and needs of the citizenry of each state. Extension also hosts customer-friendly websites loaded with information sheets, publications, reports and other outreach materials designed for its stakeholders. Extension is organized regionally; however, the Extension structure on the Gulf coast is separated into two regions. Objective 1. Establishing processes for regional collaboration among Gulf of Mexico land grant universities and Extension programs. Objective 1 is a foundational component that establishes processes, through existing land grant university infrastructure, that leverages participating coastal Extension and other programs to provide a consistent, coordinated, multi-state approach that delivers effective engagement, research, technology transfer, education, outreach and extension to support implementation of the RESTORE Councilâ€™s Comprehensive Plan. It is envisioned that the successful implementation of this objective will foster 1) the development of integrated, multi-state, Gulf-wide restoration and protection projects and activities that leverage the significant resources and capacity of coastal land grant universities and Extension, and 2) serve as the platform upon which to implement Objective 2 of this proposal (below). Objective 2. Disseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension.	Hancock, Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ -	$ -	
	Workforce Development	3233	11/17/2014	Port Bienville Certified Site Development	Port Bienville has no large certified, shovel-ready sites to attract new industry. Because developing such sites is a priority for HCPHC, we have identified property adjacent to Port Bienville Industrial Park (PBIP) that is ideal for development of a certified industrial site. The property (approx. 800 acres) borders our current rail spur, minimizing the cost of rail expansion. It also abuts the portâ€™s main access roadway, Lower Bay Road. Electric, gas, water and sewer utilities are at the site, making this location an ideal property for expansion of port acreage. HCPHC proposes to acquire the site, perform all necessary cultural and environmental assessments, and mitigate impacted wetlands (if any) to create a Project Ready Certified Site at PBIP.	Hancock	Yes	No	Yes	10	Yes	No	No	No	No		$ 5,500,000.00	$ -	
	Workforce Development	3234	11/17/2014	CSX Rail Bridge Replacement - Pearl River	The CSX rail bridge which crosses the mouth of the Pearl River is currently a swing bridge with a horizontal clearance of 87â€™ and a vertical clearance of 14â€™. This bridge has the smallest horizontal clearance of any train bridge located on the CSX line from New Orleans, LA. to Mobile, AL. The location of the open swing portion is located where the current of the Pearl River is at its strongest making it difficult for vessels pushing a tow to navigate between the bridge and the bank. The replacement of the swing bridge to a bascule bridge would have numerous benefits. It would increase the horizontal clearance and allow vessels to navigate in a safe manner more safely and with greater ease.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 70,000,000.00	$ -	
	Workforce Development	3235	11/17/2014	Port Bienville Industrial Park Administration Building	HCPHC proposes to construct a multi-functional, centralized administrative building at Port Bienville Industrial Park. Port administration currently operates from separate facilities. The Railroad Department is using an old fire station and the Facilitiesâ€™ Department is operating from an office connected to their equipment shed. A centralized administrative building will eliminate the separation of the Port Management team and allow more effective department coordination and oversight. The new building would be raised above ground to mitigate possible flooding impact, while creating parking under the building. This design would require a smaller footprint and less land use . As an indirect impact, a new administration building would also allow the Port to return the fire station to its original function, thereby offering better fire protection to Port tenants.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 1,500,000.00	$ -	
	Workforce Development	3237	11/17/2014	Job Training for Living Shorelines and Tidal Marsh Restoration.	Job Training for Living Shorelines and Tidal Marsh Restoration. A benefit of the RESTORE funds will be creating a stronger demand for skilled workers to install living shorelines and do work to restore tidal marshes. The skills for such green jobs combine construction and landscaping skills along with a sufficient knowledge of tidal ecology to be able to understand the end goals of a restoration project. The outdoor work environment is demanding and requires good work habits to be safe and productive. What is more, such projects are interesting to the general public and have the potential to encourage people to take better care of the environment. Therefore, the project installers often have opportunity to engage with people on site to explain the project. There is growing interest with private property owners to apply best practices to water front property and instead of rebuilding bulkheads to use more resilient and ecologically beneficial shoreline improvements. So the workers on site should understand the project and be able to explain the benefits of the project to curious site visitors. There will be a need for job training for living shorelines and tidal march restoration. The RESTORE funds for restoration projects can be leveraged to pay for such job training as a way to build capacity for future restoration projects. Many of the jobs created by such projects have pay comparable to building construction jobs and, like building construction, are job skills that are best gained by hands-on learning. The RESTORE funds will have a long-term impact on such emerging green jobs if training programs are part of the community benefits. Partnership The proposal is submitted by the Gulf Coast Community Design Studio in partnership with Moore Community Houseâ€™s Women in Construction Program. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD, Department of Energy, Small Business Administration, the National Endowment for the Arts, and the Department of Homeland Security, along with many local and regional partners. For the past three years the design studio has been working in partnership with other Gulf Coast planning agencies with the support of HUDâ€™s Sustainable Communities Initiative to produce Plan For Opportunity, a regional plan for a more resilient and sustainable Gulf Coast. Recently, the GCCDS was part of one of ten national design teams selected by HUD to participate in Rebuild By Design, in which teams worked with communities in the North East impacted by Super Storm Sandy to design more resilient future cities.	Hancock, Harrison	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 90,000.00	$ -	Curriculum development
	Workforce Development	3238	11/17/2014	Dredging between Pearl River Bridge and Intracoastal Waterway	Project Objective: The project objective is to shorten the route from the Intracoastal Waterway (ICW) to Port Bienville and Stennis Space Center. This will allow cargo vessels to travel from the Pearl River to the Gulf of Mexico. Activities to be Completed: The Hancock County Port and Harbor Commission (HCPHC) proposes to dredge the channel between the Pearl River Bridge to the Intracoastal Waterway.	Hancock	Yes	No	No		Yes	No	No	No	No		$ 4,000,000.00	$ -	

	Workforce Development	3240	11/14/2014	Women in Construction Program	Organizational Overview: Moore Community House (MCH) was founded in 1924 to serve the children of migrant workers in the seasonal fishing industry. Today MCH responds to the needs of low-income women and young children in east Biloxi through two programs that research shows make the most strategic and positive difference in moving a low-income family closer to self-sufficiency: quality affordable early childhood education and job training that leads to higher paying employment. Through the Women in Construction Program (WinC), MCH creates a pathway for low-income women to higher paying jobs in the construction industry. Women make up nearly half of the workforce in Mississippi (MS) but women earn less than men at every income and education level, and in every profession. Women are clustered in low paying jobs, making up 80% of minimum wage workers. MS has the highest rate of single-mother headed families, mothers who bear financial responsibility for children. Minimum wage leaves a family of 2 (mom and child) below the federal poverty level. Construction jobs are the only ones in MS where women earn the same wages as men, and these jobs pay an hourly wage identified by the MS Economic Policy Center as a self sufficiency wage. Thus, WinC offers a pathway for women to family economic security. The mission of WinC is to create a climate across the Gulf Coast enabling women to pursue careers which will allow them to earn wages to promote self sufficiency within the construction field. Besides helping provide well-paying jobs to the region's low-income women, it helps meet industry demands for a trained workforce. While the construction trades offer careers that provide self-sufficiency wages and good benefits, WinC is the only job-training program in the region that is tailored to prepare women for this work. At this point and time it is critical to maintain momentum by expanding programming, reaching more women, and strengthen the community towards economic and ecological recovery. Since inception of the program, WinC has graduated 22 classes totaling 220 plus women in the fields of general construction, welding, green job training, and disaster relief and recovery. Of the 220 plus women who have graduated the program, 75% of these individuals have gained employment. Graduates have gained living wage jobs in apprenticeship and nontraditional occupations in trades such as, welding, shipfitting, habitat restoration, and construction management, earning from $14 to $28 an hour. WinC is feminizing the face of construction on the Gulf Coast one well-trained woman at a time. Qualitative data is used to assess impact that improves socioeconomic wellbeing. Participants have made cross cultural bonds, left abusive relationships, gained GEDs, housing, improved upon health/wellness, and made huge strides that improve their wellbeing and quality of life. Proposed action: Moore Community House seeks RESTORE funds of $1,500,000 for Women in Construction Program to recruit, train, and place women into jobs created by RESTORE projects; and to improve the outreach, training, employment, and retention of women in nontraditional occupations; as well as train low-income women in construction trades and in skills required by current and upcoming industries. By using innovative techniques, this program will expose women to nontraditional career pathways that meets the demands of future ecosystem restoration projects along the Gulf Coast through upcoming RESTORE opportunities. The goal of the proposed program is to place women into employment focusing on skills such as living shoreline, marsh creation and environmental recreation construction while increasing capacity	Mobile,Jackson,Ge	Yes	Yes	No		Yes	Yes	No	No	No		$ 1,500,000.00	$ 250,000.00	
	Workforce Development	3241	11/17/2014	College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA)	Brief Title: College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA) Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438; Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402; Dr. Faye Gilbert, Faye.Gilbert@usm.edu, 601-266-5544 Type of project: _x_Infrastructure __x_ Educational program __x___Research program __x_Workforce development __x_Economic development __x_ Eco-Restoration __x_ Seafood __x__Other (Name): Tourism Brief description of activities: The proposed building will house the College of Business on the USM Gulf Park campus and the Center for Coastal Analytics (CCA). Since Hurricane Katrina, the College of Business at USM Gulf Coast (CoBGC) has been housed in an inadequate modular structure. The CoBGC serves the educational needs of over 500 undergraduate and 100 MBA students each year. The CoBGC operation will include the new Center for Coastal Analytics (CCA), created for the purpose of conducting economic impact analyses, primary research projects, financial analyses, business assistance for entrepreneurial start-ups, and graduate education focused on two critical sectors of the Mississippi Gulf Coast economy: blue economy activities and Coastal tourism. The new building (and CCA) will be constructed on the Gulf Park campus of the University of Southern Mississippi and will unite and house the intellectual capital of the College of Business. The CCA will provide long-term economic impact analyses and primary research for the commercial seafood fisheries (i.e., shrimp, crab, oyster, spotted seatrout, red snapper), recreational fisheries and marine tourism, and Coastal tourism sectors unique to the Mississippi Gulf Coast (gaming, hotels and lodging, restaurants, sports tourism, ecotourism, creative economy tourism, culinary tourism, festivals and events unique to the area such as Cruisinâ€™ the Coast). The CCA will provide business plan assistance and training to support entrepreneurial activities. The CoBGC and the CCA will support the development of two unique graduate certificate programs in the country: marine economics and coastal tourism. These programs will train graduate students from the marine sciences and fisheries in the business analytics and strategies associated with Coastal marine activities; the certificate in coastal tourism will train graduate students and working professionals/executives in the business valuations of tourism sectors and new ventures. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $30,000,000 (1 year) Annual Operation & Maintenance Cost (# years): $500,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? Establishment of the CoBGC and the CCA will foster research and graduate education unique to the coastal economy of Mississippi and will directly support the common themes that emerged in every section of the GoCoast 2020 final report: the need for economic impact analyses and primary business research and education. The collective call for business research and assistance is supported by	Harrison	Yes	No	Yes	86	Yes	Yes	Yes	Yes	Yes		$ 35,000,000.00	$ -	
	Workforce Development	3243	11/18/2014	Port Bienville Industrial Park Trans-Loading Terminal Completion	HCPHC proposes to complete build-out of its trans-loading terminal facilities, thereby substantially increasing the Port's competitive advantage and ability to attract outside industry. Phase 1 and 2 of this project have been implemented and the area is now used for trans-loading material to/from rail and/or truck. This project will implement Phase 3 by developing the water front (bulkhead) and extending rail to the water. This project will improve the terminal for use in trans-loading of grain, pellets, crude oil, coal, steel, bulk liquid or other materials and will become functional for container on barge operations. The terminal will also be used to support supply vessels in the offshore industry. All of the referenced industries have considered locating at Port Bienville in the past 12 months; completion of this project will substantially increase the portâ€™s ability to secure investment from such companies.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 12,000,000.00	$ -	
	Workforce Development	3244	11/18/2014	Stennis International Airport AeroTech Site Development	HCPHC proposes to completely develop an unimproved parcel owned by HCPHC into an 1,100 acre certified mega-site for use as an aerospace and technology industrial park. The Go Coast 2020 Report specifically lists this project as a priority for long-term coastal growth and recovery (Section 3. Economic Development, p. 14, "Priorities: Asset Development and Capacity"). HCPHC purchased an 1,100 acre site adjacent to Stennis International Airport for development into an aerospace technology park. Such a facility is paramount to the continued growth of the John C. Stennis Space Center, Stennis International Airport and the Mississippi Gulf Coast. Situated approximately 2.5 miles from Interstate I-10, between New Orleans and Gulfport/Biloxi, this mega site is adjacent to the Stennis International Airport runway and, with the addition of office building complexes, aircraft hangars and manufacturing facilities, promises to support jobs from Mobile, AL to Baton Rouge, LA. Utilities are in near proximity to the site; however, wetlands mitigation, site clearing and roadway and utility extension are needed to achieve site-ready status. Funds awarded through this project will be complete all cultural/environmental assessments, wetlands mitigation, site clearing, utility extensions/relocations, and any other functions required to achieve site-ready status.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 25,000,000.00	$ -	
	Workforce Development	3245	11/18/2014	Stennis International Airport Terminal Hangar Complex - Phase II	HCPHC proposes to complete Phase II of the Terminal Hangar Complex at Stennis International Airport (SIA). Construction of Phase II of the Terminal Hangar Complex will promote continued growth of nearly all aeronautical activities on the airport. Additional maintenance, line service, administrative, management and airline personnel will be hired with the expansion of these facilities.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 3,500,000.00	$ -	
	Workforce Development	3246	11/18/2014	Stennis International Airport Hangar Construction	HCPHC proposes to construct an additional two-bay, narrow-body hangar at Stennis International Airport (SIA). SIA continually receives requests for aircraft hangars. The airport has been forced to compete with military base closures, which have made facilities available at below-market rates and values. In order to remain competitive, SIA requires an additional two-bay, narrow-body hangar. Airport administration estimates that such a hangar can produce as many as 50 new jobs at the facility.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 6,000,000.00	$ -	
	Workforce Development	3247	11/18/2014	Stennis International Airport Hangar Purchase	HCPHC proposes to purchase two (2) private hangars at Stennis International Airport (SIA). The Federal Aviation Administration (FAA) restricts activities that can occur from a private hangar at a federally funded airport. By purchasing two (2) existing hangars that are privately owned, HCPHC will remove all restrictions on economic development activities at those sites. This will quickly expand the infrastructure available at SIA and simultaneously allow HCPHC to use previously-restricted sites to attract new industry to the facility.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 1,650,000.00	$ -	
	Workforce Development	3248	11/18/2014	Port Bienville Industrial Park Webre Road Warehouses	HCPHC proposes to construct two new warehouses along Webre Road in Port Bienville Industrial Park (PBIP). This project would consist of constructing two new warehouses along Webre Road at PBIP. The Port has two existing warehouses which are presently rented leased to capacity and new and existing businesses continue to make requests and continues to receive request for additional warehouse space. Construction of two (2) new warehouses (approximately 50,000 s.f. each) would create additional space at the Port for existing tenants and would present prospective tenants with warehousing options not currently available because of limited existing capacity.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 4,500,000.00	$ -	
	Workforce Development	3249	11/18/2014	Stennis International Airport Apron Expansions	HCPHC proposes to expand three existing aprons (North, South, and Main Aprons) and construct an additional apron (West Apron) as follows, generally improving airport infrastructure for current tenants and contributing to the marketability of vacant sites: - Construct West Apron ($2,700,000) Construction of an apron on the west side of the existing runway will allow for an immediate increase in hazardous aircraft operations. This isolation pad will allow military training and hazardous air cargo handling autonomously from civilian aircraft operations. This construction will have regional economic development implications as an isolated facility like this does not exist in the region. - Expand Aircraft Apron North ($1,400,000) This expansion of the north apron would provide the property south of Texas Flat Road accessibility to the runway for development. As hangars are constructed for tenants, the expansion of this apron would offer staging and parking of aircraft working in this area. - Expand Aircraft Apron South ($1,800,000) Expanding the aircraft apron south would increase the amount of apron space that tenants could use for aircraft engine run-ups and parking of aircraft entering or exiting repair facilities. This expansion project could increase the number of aircraft that may be staged at Stennis and alleviate the problems of scheduling of aircraft due to apron space availability. - Expand Aircraft Apron Main ($1,200,000) This project would increase that area used for heavy load cargo operation at Stennis International Airport. This increase apron would allow for cargo operation and would not disrupt the operations of corporate and military aircraft operating and training at the airport.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 7,100,000.00	$ -	
	Workforce Development	3250	11/18/2014	Stennis International Airport Road Extension	HCPHC proposes to extend Fred and Al Key Road at Stennis International Airport (SIA). Fred and Al Key Road is the frontage road for SIA. Extension of this road will allow SIA to develop a 20 acre site for industrial, aerospace, or technological development. (The site is not currently accessible by road.) Improvement of this infrastructure will also open access to many acres of private property for similar investment and development.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 2,400,000.00	$ -	

	Workforce Development	3251	11/18/2014	Stennis International Airport Taxiway Expansions	HCPHC proposes to extend existing taxiways and construct additional taxiways as follows, generally improving airport infrastructure for current tenants and contributing to the marketability of vacant sites: - Extension of Taxiway C ($1,000,000) Extending Taxiway C (Charlie) west will allow the first phase of development onto the adjacent 1,100 acres available to develop an aerospace technology park. - Construction of Parallel Taxiway as an Assault Landing Strip (ALS) ($2,600,000) Construction of a parallel taxiway that can be used as an Assault Landing Strip (ALS) for C-130 Hercules aircraft will specifically support Keesler Air Force base on the Mississippi Gulf Coast and will provide an economic development opportunity for Hancock County, as C-130 aircraft from around the United States will utilize the combined existing drop zone with the assault landing strip. - Extension of Taxiway S ($1,300,000) This project would enhance the safety on the airfield tenants. Taxi-lane â€œSâ€would enable a non-movement area excess and to connect the north and main airport apron areas. These are the primary areas used for heavy load operations and aircraft staging awaiting maintenance and repair.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 4,900,000.00	$ -	
	Workforce Development	3252	11/18/2014	Port Bienville Industrial Park Site Development	HCPHC proposes to perform site preparation activities on various sites throughout Port Bienville Industrial Park (PBIP). This project will contract cultural assessments, environmental assessments, geotechnical assessments, soil assessments, and wetlands delineations for many sites within PBIP. This project will also mitigate identified wetlands, thereby making sites immediately available for development. Increasing the availability of shovel-ready sites in PBIP will enhance the Port's ability to compete for industrial investment and development.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 9,000,000.00	$ -	
	Workforce Development	3267	11/18/2014	Gulf Observing Aerial Program (GOAP) Feasibility Study	HCPHC proposes a study to determine the feasibility of the Gulf Observing Aerial Program (GOAP). Because of the importance of the Gulf of Mexico to vital interests such as seafood, commerce, energy and recreation, it is imperative that we closely monitor this body of water and coastline for any signs of environmental threats. Our heightened awareness that offshore drilling disasters can affect the entire Gulf, instead of just one spot, should warrant the implementation of a Gulf-wide monitoring system (GOAP) that can best be achieved by the utilization of a robust and diverse fleet of unmanned aircraft with remote sensing and monitoring equipment. Stennis International Airport, with its unpopulated corridor to the Gulf, can be the base of operations for a combination of fixed-wing, rotary-wing, and lighter-than-air airships. This program would create approximately 300 jobs on the Mississippi Gulf Coast.	Hancock	Yes	No	Yes		Yes	No	No	No	No		$ 400,000.00	$ -	
	Workforce Development	3271	11/18/2014	Stennis International Airport International Flight School	HCPHC proposes to construct an international flight training facility at Stennis International Airport (SIA). International student flight training demand continues to increase, as flight training in foreign counties becomes more cost prohibitive. A training facility at SIA for international students will allow for increased aircraft activities at the Airport, create new flight instructor positions, and will bring the Mississippi Gulf Coast a previously untapped influx of foreign monies.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 650,000.00	$ -	
	Workforce Development	4244	11/18/2014	National Center for Strategic Planning and Emergency Response	Natural and man-made disasters are a part of this nationâ€™s landscape as evidenced dramatically on the Mississippi Gulf Coast by Hurricane Katrina and the Deepwater Horizon Oil Spill. News of other disasters, contagious diseases and national security threats is a daily occurrence. Strategic planning and preparedness is essential for the protection of life and property and quick response to and recovery from such events. To provide strategic planning and training services to communities, individuals, businesses and officials who plan and prepare for, take actions to protect against, respond to and oversee recovery from disasters and emergencies, Mississippi Gulf Coast Community College (MGCCC) proposes the â€œNational Center for Strategic Planning and Emergency Response Training.â€With a robust focus on strategic planning and community resilience, the goal of this project is the planning, development and implementation of a comprehensive center that will provide strategic planning and training services to a local, regional and national audience. Objective 1: Planning activities shall include the establishment of an advisory team consisting of local, regional and national representatives, defining a specific mission and scope of work for the Center, identifying a physical location for the Center, and researching best practices for Center operations. Objective 1 outcomes will be a well-qualified advisory team, a mission statement and scope of work for the Center, a defined location for the Center and the identification of best practices for use in the deployment of the Center. Objective 2: Development of the Center shall consist of physical, operational and programmatic activities. Activities will include securing and equipping a physical location, hiring Center personnel, development of strategic planning methodologies, training programs, a marketing plan and other activities as required to meet the outcome of establishing an operational, National Center for Strategic Planning and Emergency Response Training. Objective 3: Implementation of the Center will focus on initiating the developed strategic planning process in the local coastal community and expanding it to other communities nationwide and on offering the identified and developed training to communities, individuals, businesses and officials who are on involved in strategic planning and the preparation for, response to and recovery from disasters at the local, regional and national levels.	Harrison, Jackson,	Yes	No	Yes	75	Yes	Yes	No	No	No		$ 20,000,000.00	$ -	
	Workforce Development	4245	11/18/2014	Air Service Development Incentives-Mississippi Gulf Coast Affordable Air Service	With significant recent consolidation in the airline industry, the competition for air service is becoming increasingly keen. Smaller markets like Gulfport-Biloxi impacted by the Gulf oil spill are competing for service against markets with much larger population bases and significant resources. Domestically, four airlines now control approximately 80% of the market share and 90% of the revenue and communities from across the country are vying for a limited amount of new service. To ensure the viability of new air service offerings at a smaller market like the Mississippi Gulf Coast, it requires a strong, collaborative public/private partnership. A combination of airport incentives, marketing programs and an initial revenue guarantee to the airline during a ramp-up period between 12 to 36 months would allow for a new city to become self-sustainable. Two examples where this type of collaborative effort has worked in the Gulfport-Biloxi market has been the addition of air service to Minneapolis/St. Paul (MSP) and Orlando-Sanford (SFB). The MSP service was started with a small revenue guarantee from the US Department of Transportation. The grant was for $350,000 and approximately $187,000 has been utilized to date bringing in service for the past three Fall seasons. This seasonal operation has contributed approximately $3 million to the local economy based on the $717 spend figure per passenger for a 3-night stay noted in the 2013 air service study. Incentives offered by the State of Mississippi also led to the initiation of recent service to Orlando-Sanford. The economic impact of adding any new service to the market is significant. The Minneapolis example above shows what a smaller seasonal program can contribute to the local economy. For an example of a larger program, if two times per week service to a new market were to be added for the period of one year utilizing the following assumptions (MD-80 aircraft 166 seats operating with a load factor of 70%) the program would generate 12,084 new passengers to the MS Gulf Coast. Using the spend figure of $717, the economic impact for that one year would be approximately $8.6 million. Project attributes * Easily Measured - Passenger numbers can be quantified and each has an average spend in the market. * Community support - Support is derived from Visit MS Gulf Coast, Gulfport-Biloxi International Airport, the casino gaming industry and the general public. * Coast-wide impact - Increases access to markets not currently flown by bringing in visitors who spend more and would not drive to the market due to distance. Supporting facts * Additional air service will be needed to support an increase in meetings and convention business as well as enhanced tourism. * When a low-cost air service offering enters a market, it not only provides an affordable way for visitors to access your market and locals to be able to travel, it also lowers the fare structure at the airport increasing savings for local companies who fly on a regular basis * Our current air service lags comparable and competitive destinations in terms of volume and accessible markets. * Visitors who travel from farther distances by air, stay longer according to a visitor study conducted in August 2013. However, 95% of visitors currently arrive to the MS Gulf Coast by car or bus. * An air service study conducted in October 2013 reported that air visitors spend 50% more than visitors who arrive by car or bus because of a 30% longer stay and 20% higher spend. Based on current	Harrison	Yes	No	No		Yes	No	No	No	Yes		$ 2,500,000.00	$ -	
	Workforce Development	4257	12/8/2014	Habitat Mapping the Waters of Mississippi Sound	Benthic Mapping of the MS Sound: This project proposes to comprehensively map the Mississippi Sound using Multibeam Echo Sounders (MBES) augmented with Airborne Lidar Bathymetry (ALB) system. The underlying purpose of the project is to establish a baseline benthic habitat map of the Sound; however, the data have numerous additional uses. The data will provide measurements of pelagic biomass over various habitats and suitability of seafloor substrate to support existing or future reefs. The resulting Digital Elevation Model provides the essential boundary layer for dynamic modeling of the Sound to enhance, circulation, sediment transport, and storm surge/coastal inundation simulations. Revisit surveys to key areas can assess habitat response to natural or anthropogenic stresses, siltation, reef material subsidence, and sea level rise. The gold standard for obtaining high precision, hydrographic measurements is 100% coverage (insonification) of the sea floor using acoustic MBES. Obtaining 100% coverage of Mississippi Sound using MBES is an extensive project. Multibeam sonar covers a swath of the seabed out to a width of approximately 5 times the water depth. Figure 1 outlines the areas of the Mississippi Sound bounded by a depth contour of approximately 2 meters (black contour line). The average depth through The Mississippi Sound is less than four meters. Using the equipment currently owned by The University of Southern Mississippi, a maximum line spacing of 10 meters is required to obtain 100% coverage. Due to declining returns in shallow water and safety of navigation, a minimum survey depth of approximately 2 meters is recommended. A polygon of survey extent based on the 2 meter contour and a line spacing recommendation of 10 meters, an estimate of survey time can be established. Planning the lines in a north south orientation would allow for efficient data collection and manageable data files. The average width of Mississippi Sound is approximately 6 Nautical Miles (Nm), and with an average survey speed of 6 knots, each line of data collection will take approximately 1 hour to complete. If a line spacing of 10 meters is utilized from the Mississippi/Louisiana border to the Mississippi/Alabama border, a distance of approximately 120 km or 120000 meters, a line count of approximately 12000 lines can be then be assumed. 12000 lines each at a length of 6 Nm, equates to 72000 Nm of survey lines. Completing all lines would require 12000 hours. Other factors that need to be considered in a time estimate are transit times, turns between lines, time to obtain sound speed profiles, and time to take bottom samples. At a minimum, an additional 25% should be added to the initial line estimate, for a total of approximately 15000 hours. Completion time estimates based on single vessel operations show a projected completion time of 10 years, based on successfully collecting data 188 days per year. The time scales vary accordingly with addition of multiple vessels. Operational days per year will heavily depend on weather and equipment functionality and are difficult to estimate. This proposal recommends an upgrade to existing equipment to increase the efficiency of data collection to reduce the collection time to 5 years. Additionally, ALB systems provide an efficient method for collecting data useful in delineating benthic habitats in shallow water. The Coastal Zone Mapping and Imaging Lidar (CZMIL) was specifically	Hancock,St Tamm	Yes	Yes	Yes	10	Yes	Yes	Yes	No	Yes		$ 4,515,000.00	$ -	

	Workforce Development	4258	12/10/2014	Remediation of Oil Spills and Gas Releases by Biochar Activated at Low-Temperatures	I.Introduction Biochar has emerged as a promising sorbent for recovering or containment of marine crude oil spills (Nguyen and Pignatello, 2013). Biochars are porous, and has a bulk density lower than that of seawater so that biochar particles float on seawater. Biochars contain pores with hydrophobic internal surfaces that are wetted much faster by organic compounds rather than water (Gray et al., 2014). This difference is particularly noticeable when the biochar is produced from pyrolysis at low temperatures (e.g., 370Â°C). Thus, the spilled oil can effectively fill the pores of biochar particles while water cannot. Biochar can also adsorb the dissolved oil species and remediate the contaminated seawater. Biomass is abundant in the Gulf region and biochar is usually a byproduct in biofuel production. It is therefore relatively inexpensive compared to other synthetic absorbents. Moreover, the spent biochar can be burned directly along with the absorbed oil in controlled environments for energy production. That is, there is no need to separate the absorbed oil from the biochar for their end use, and the energies of both biochar and oil can be recovered. As results of these advantages, bioochar is likely a cost-effective absorbent for remediating spilled oil. II.Necessity for Activation and Newly discovered Method Absorption is a major technology for the remediation of spilled oil and contaminated water. Sorbentâ€™s absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbentâ€™s internal pore volume and surface area. Nguyen and Pignatello (2013) reported that biochar from hardwood has a lower absorption capacity than those of many synthetic absorbents. Thus, internal pore volume of biochar has to be increased. CO2 and water are usually used to burn a fraction of carbon in generating larger pore volume during activated carbon production. Such physical absorption usually employs a temperature in the range of 600â€“1200Â°C, signifying the energy intensity required for such activation process. Recently, the Sustainable Energy and Environment (SEE) group at the University of Mississippi (UM) developed a family of new methods for biochar activation that was conducted in the temperature range 65-70Â°C. The energy throughput for the activation is much lower than the traditional methods. SEE is able to achieve a 16-fold increase in internal surface area, from 12.9 to 1890 m2/g. This activation approach is simple and requires agents that are readily available everywhere. Moreover, SEEâ€™s low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biocharsâ€™ internal surfaces. Considering these benefits of energy consumption and those mentioned in the last section, the cost for such oil-absorption concept is likely to be highly competitive to the current remediation methods. III.Proposed Work The proposed work will include the following tasks. 1.SEE group will produce biochars from typical readily available biomasses in the Gulf States including rice husk, rice straw, switch grass, and hardwood under different conditions in our Combustion Lab. 2.SEE group will activate and characterize the biochars by using our novel activation and analytical methods, 3.SEE will optimize the variables for pyrolysis and treatments.		Yes	Yes	No		Yes	Yes	Yes	No	Yes		$ 300,000.00	$ -	develope product and create industry in MS
	Workforce Development	4261	12/19/2014	Convention Center Complex	Mississippi Coast Coliseum and Convention Center has a disadvantage in competing for business.Most convention center complexes offer accommodations, dining options and shopping. Since the Coast Coliseum and Convention Center does not offer additional amenities within the complex or walking distance, many groups will not consider hosting their meetings or events on the Mississippi Gulf Coast. By purchasing the 20 acre plot of land on Beach Boulevard, Mississippi Coast Coliseum and Convention Center would secure the integrity of the footprint of the complex and would be able to then offer developers a lease of the land without it being an addtional inventment to them. The Coast Convention Center and the Mississippi Gulf Coast Regional CVB would commit marketing and sales dollars toward attracting convention and meeting groups that would utilize the facility. Property value is estimated at $5,000,000. The convention center complex would: 1.Sustainable 2.Creates jobs 3.Community and private developer shared investment 4.Coast-wide impact 5.Generates new State and local tax revenues Supporting facts 1.60% of meetings and conventions that can be accommodated by Gulf Coast facilities will not even consider the MS Gulf Coast because they require a Convention Center Headquarters Hotel 2.The MGCRCVB and Coast Coliseum & Convention Center staff have tracked more than $27 million in lost potential revenue over the past 3 years due to not having a Convention Center headquarters hotel 3.Our ability to accommodate these additional meetings and conventions will expose our destination to new visitors, increase much needed midweek occupancy when these meetings and conventions are typically held and could potentially translate into an incremental $90 million in direct spending according to past research 4.This project would create permanent jobs in the hotels, dining and shopping establishment along with construction jobs.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 5,000,000.00	$ -	
	Workforce Development	4263	12/19/2014	Costal Workforce Development and Training	The Workforce GoTeam recommends developing a two-year marketing campaign focused on promoting workforce development and training in the three coastal counties of Hancock, Harrison and Jackson. The marketing campaign will help support the effort to develop and sustain a highly qualified workforce, as well as support the partnership efforts with the local school districts and high schools, Mississippi Gulf Coast Community College (MGCCC), Pearl River Community College (PRCC) and MDES WIN Job Center. The campaign will connect high school students, parents and the unemployed with the community college training programs and companies in need of a skilled workforce. Though informative, the campaign will concentrate on being persuasive in nature. It will focus on persuading residents in our target audiences that staying on the Mississippi Gulf Coast and taking a more immediate career path is not only acceptable, but also attainable. The benefits of being employed and remaining/living on the Mississippi Gulf Coast will also be touted in a visually and verbally compelling manner. A particular emphasis will be placed on high school students, their parents and their guidance counselors to convey the opportunities available through alternate education and training. The end result of the non-collegiate career path will be communicated by illustrating the promising future (highly competitive salary, job security, quality of life) these individuals face â€“ with the appropriate training. This effort will help level the playing field for college path and non-collegiate career path high school students, thus helping to decrease the dropout rate and increase the employment rate.		Yes	No	No		Yes	Yes	No	Yes	Yes		$ 2,000,000.00	$ -	
	Workforce Development	4264	12/19/2014	Mississippi Aquarium	This project proposes a world-class aquarium to be built along U.S. Highway 90 in Gulfport, Mississippi on a total of approximately 18 acres of land overlooking the redeveloped Jones Park and Small Craft Harbor. Depending on features, shows, and exhibits, it could be as large as 130,000 square feet, and cost in the neighborhood of $120,000,000. This facility will serve to fill the void left by the loss of the Marine Life Oceanarium and provide for a much-needed family-friendly and education-oriented tourism facility for our Gulf Coast market. Unlike many projects that seek either full funding or have no stakeholder buy-in, this proposal has been in the works for some time, with the understanding by Gulfport city leaders that in seeking support, local commitment must be demonstrated to emphasize the significance of the shared vision of making this a reality. On December 2, 2014, the City Council unanimously approved obligating $14 million of City funds toward the purchase of approximately 10 acres of land to be acquired for this project site. When combined with the County Library and CTA properties, there will be roughly 18 acres for development as a campus for this project which has the potential to also include retail, restaurant, and lodging amenities. The appeal of this location is not only the scenic overlook, but the elevation itself is more desirable than at the waterâ€™s edge. It is important to note that this section of Gulfportâ€™s downtown remains under-utilized, undeveloped, and modestly blighted. From an urban renewal standpoint, this is a home run! Obviously, the economic benefit to Gulfport and the surrounding communities can be a game changer through increased tax revenues and site leases. The Gulfport Redevelopment Commission will have developmental authority over this project, and has taken a methodical approach to performing due diligence measures in order to achieve an accurate picture of what the potential for this ambitious development represents. To that end, David Kimmel, former Construction Project Manager and Executive Director of the Georgia Aquarium, has been hired as a consultant to assess options, reach out to industry contacts, and make recommendations to guide our progress. A market assessment is currently underway with the objective of confirming the range of customer draw, anticipated number of visitors, exhibit type, animal/species features, interactive attractions, physical plant requirements, square footage size recommendations and configuration, and ticket prices our market will bear. From a partnership standpoint, we have the commitment of the Harrison County Board of Supervisors to transfer title to a parcel of land containing the old Harrison County Library building adjacent to the existing campus. Coast Transit Authority has committed to developing that structure and the adjacent underutilized parking garage into a multimodal transit station, to include visitor information and pedestrian services, bicycle rentals, and bus stop access. In conjunction with the Mississippi Department of Transportation, they are also engaged in developing support for a pedestrian tramway/crosswalk over U.S. Highway 90 which would provide a much needed safety component for public access between the aquarium property and the Jones Park/Small Craft Harbor area. To further demonstrate the viability of this project, we have already received commitment from the private sector, with a developer desiring to build a minimum 200 room hotel in conjunction with the aquarium build-out. We have also had more than a passing interest from companies in the business of aquarium construction and operation that are at present performing their own market assessments for this project. We are seeking support from the State of Mississippi through bond proceeds, and have spoken to our Federal delegation about the impact this development could have. Finally, we anticipate developing partnerships with the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory and Mississippi Stateâ€™s College of Veterinary Medicine which will serve to greatly enhance the breadth of mission we expect this transformational facility to have. This project is consistent with at least four (4) of the eight (8) eligible requirements of the Restore Act and GoCoast 2020. The enhancements to tourism, workforce, infrastructure, marine research & education, and environmental stewardship through making Mississippiâ€™s Aquarium a reality will have generational economic development benefits and provide a cure for one of the most identified lapses in our Gulf Coast region â€“ family-oriented attractions - a component necessary to helping our region achieve Premier Tourism Destination status.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 120,000,000.00	$ 14,000,000.00	
	Workforce Development	4266	12/19/2014	Tourist Corridor and Gateway Beautification - Pedestrian Areas	A more attractive appearance, tourist friendly public amenities and coordinating tourist information signage is needed in order to maximize the effectiveness of programs and marketing that generates trial to our destination. 2.According to a recent visitor perception study, the beauty of the area is an attribute that drives visitor satisfaction. Of those that were not satisfied with their visit, 36% noted cleanliness and the perception of Katrina recovery issues as a major reason. 3.This research also shows that one of the reasons cited for not visiting the Ms Gulf Coast is lack of a variety of things to do. With over 600 visitor amenities, attractions and activities available, it is clear that we need to improve our communication of tourism offerings. 4.Improving visitor signage will increase awareness of tourism offerings and increase length of stay and therefore economic impact. 5.A recent study in a competing market indicated that 20% of their visitors pass through one or all of our Coastal counties on their way to their market, however there is very little directional signage on the major by-ways appealing to visitors. 6.Improving the visitor experience will generate return visits and invaluable word of mouth advertising for our destination, especially in this age of social media when personal experiences and endorsements are the most trusted source of information for travelers. 7.Harrison and Hancock County already have fully developed plans with costs that include tourist friendly areas, signage, parking, amenities and more that would make Beach Boulevard and Hancock County waterfront and beach areas a true visitor destination. These plans could easily be expanded and coordinated for Jackson County tourist areas. Managing these plans as one project with inter-local agreements and cooperation between municipalities will enhance and strengthen our destination marketing as one Mississippi Gulf Coast. 8.Several parts of the plan have already been funded and are expected to be completed this year including way-finding signage coordinated with a tourism entity directory. 9.Additional jobs will be created to complete construction and installation of the new facilities and enhancements as well as potential permanent jobs necessary to provide ongoing maintenance. Required Funding: Complete pedestrian areas used for walking, biking, jogging, etc. along the beach via continuation of concrete boardwalk where missing - $9,600,000	Hancock,Harrison,	Yes	Yes	Yes	50	Yes	No	No	No	Yes		$ 9,600,000.00	$ -	

	Workforce Development	4267	12/19/2014	Family Friendly Amenities	Prior to Hurricane Katrina, the Coast offered a large variety of family activities available at all price points that have not been rebuilt. According to visitor perception research, variety of things to do drives repeat visitors. 2.Investments that broaden visitor experience could help to increase length of stay. TNS research indicates that the average length of stay for visitors along the Gulf Coast is 2.8 nights compared to 3.4 nights nationally. Reaching the national average length of stay could increase visitor spending by $160 million annually. 3.Insurance costs and more stringent building requirements has made rebuilding these family friendly attractions cost prohibitive 4.New attractions will require staffing and therefore create new jobs 5.The new Ballpark in Biloxi, re-opening of the Water Park in Waveland and others throughout the Coast are a good start but must be augmented by additional complementary attractions in order to recapture this lost market segment. B.Required funding 1.A matching grant fund of $7,500,000 for new or expanded family friendly attractions built near or in conjunction with lodging facilities and/or other existing family friendly attractions C.Project attributes 1.Sustainable 2.Coast-wide impact 3.Generates new state and local tax revenue 4.Creates jobs		Yes	No	Yes	100	Yes	No	No	No	Yes		$ 15,000,000.00	$ 7,500,000.00	
	Workforce Development	4272	12/23/2014	Stennis International Airport Aerospace Academy	HCPHC and Pearl River Community College jointly proposed to establish an Aerospace Academy at Stennis International Airport. With the proliferation of aerospace development in the greater Hancock County region, Stennis International Airport is primed to serve as home for Mississippi's Aerospace Academy. The academy will train the next generation of aerospace workforce in Mississippi and create a tremendous competitive advantage for the stat's aerospace development efforts.	Hancock	Yes	No	Yes	100	Yes	Yes	No	No	No		$ 2,000,000.00	$ -	
	Workforce Development	4275	12/26/2014	Nature-based Tourism Program	The main focus of this project will be to form a collaborative effort in the development of a Task Force to sustain and promote the MS Gulf Coast National Heritage Area (MSGCNHA) as a premiere destination for Nature-Based Tourism opportunities. This project will identify opportunities approved as part of the MSGCNHA Management Plan which has a mission to promote the understanding of, conserve, and enhance the heritage resources located within the six counties of the MS Gulf Coast by sharing the areaâ€™s nationally significant story with residents and visitors through activities and partnerships that celebrate the areaâ€™s unique history, people, traditions, and landscape. The MSGCNHA is a partnership of communities, governmental agencies, natural resource managers, nonprofit organizations, academic institutions, the tourism industry, and nature-based businesses along with countless others who value the regionâ€™s rich cultural and environmental diversity, history, natural beauty, and traditions. These partnerships enhance, conserve, promote and provide connectivity among the MS Gulf Coastâ€™s many heritage resources. These resources provide heritage tourists with authentic experiences reflective of the MS Gulf Coast National Heritage Areaâ€™s overall mission and Management Plan. The MS Gulf Coast National Heritage Area plan explores methods which would serve to make natural areas and living traditions economically beneficial and available to the public directory to business owners and practitioners of traditions and indirectly to the area as a whole. Economic benefits come directly from fees for tours, food and lodging, transportation, lessons, music, re-enactments, and heritage based products such as crafts, music, posters, publication, and art. There are also indirect benefits through the impact of heritage tourism on the local economy in terms of support services. One of the many strengths the Mississippi Gulf Coast offers is the large amount of undeveloped area within it which is available for recreation purposes. The Task Force will identify businesses that will allow residents and visitors to experience these extensive natural areas. Available experiences range from chartered fishing trips in the MS Sound, canoe trips on the areaâ€™s many inland waterways, or a beautiful bike ride on our scenic Mississippi Coastal Heritage Trail. The Task Force will work with local groups and businesses to explore ways to expand the availability of nature-based tours. These types of activities provide the authentic experiences that heritage tourists seek. This Program will build upon existing nature-based tours such as paddling on the Pascagoula River, the largest impeded river system in the lower 48 states, and guided excursions to the barrier islands of the MS Sound. The key to developing a successful Nature-Based Tourism Program is to build upon existing publicly accessible heritage resources that focus on Mississippi Gulf Coast heritage and traditional practices. This will be accomplished in two Phases: Phase 1: Funding allocated to MS Gulf Coast National Heritage Area to conduct the necessary research to develop a plan to grow Nature-Based Tourism. Phase 2: On-going funding allocated to implement the Nature-Based Tourism plan in partnership with businesses, conservation and nature-based interests, and local decision makers.	Hancock,Jackson	Yes	Yes	No		Yes	No	No	No	Yes		$ 6,000,000.00	$ 1,000,000.00	
	Workforce Development	4276	12/27/2014	Mississippi Coastal Heritage Restoration, Education, & Preservation Trail	Funding is requested to establish the Mississippi Coastal Heritage Trail (MCHT), a 100+ mile multi-use pathway linking coastal communities from Grand Bay National Estuarine Research Reserve to NASAâ€™s Infinity Science Center. While increasing public understanding and providing public access to natural resource interpretive sites, waterways, islands, and forests, this Trail will also provide an opportunity to educate community members and visitors about the effects of the Deep Water Horizon Oil Spill on Gulf Coast communities. MCHT will serve as an educational tool to teach about the interaction between humans and the marine environment as well as offer recreational access to a pedestrian/bikeway stretching across the historic and culturally rich Mississippi Gulf Coast. The MCHT will serve as the backbone of the physical network of cultural, historical and natural places where residents and visitors alike can connect with these places. Heritage Trails Partnership of the Mississippi Gulf Coast (HTP), highly supported by the National Park Service, is working to reconnect residents and visitors to the coastal ecosystems that surround them through recreational trails and conservation education projects. HTP is creatively fostering connections to education and tourism growth through trails and greenways while safe guarding the quality of coastal destinations. HTP has rallied all communities along the Mississippi Gulf Coast in a dialogue about creating a network made up of blueways and greenways where one did not exist. HTPâ€™s diverse Board of Directors, including community leaders of conservation, business, planning and health organizations, now leads the effort to create the Mississippi Coastal Heritage Trail (MCHT), recognized by the U.S. Department of Interior through the Americaâ€™s Great Outdoors Initiative. HTP has become a vibrant instrument for information exchange and building of interagency trust, related to trail projects, for the benefit of all coastal communities.	Hancock,Harrison,	Yes	Yes	Yes	78	Yes	Yes	Yes	Yes	Yes		$ 25,775,000.00	$ -	
	Workforce Development	4281	12/31/2014	Workforce Marketing for NASA Stennis Space Center	NASA STENNIS SPACE CENTER TECHNOLOGY CORRIDOR WORKFORCE MARKETING The Mississippi / Louisiana Gulf region has all of the economic development elements in place to build a thriving economy: infrastructure; human capital; marketable locations; and, quality of life and place. It is important now more than ever to invest in the long term sustainability of economic growth and prosperity of business and industry along the Gulf Coast Region. Residents and businesses in Louisiana and Mississippi have struggled to overcome the effects of Hurricane Katrina, the decline of the national economy, and the Gulf Oil Spill. The Restore Act provides a unique opportunity to bring the people of the Gulf Coast together as one region to positively affect the Coast economy. The region is home to one of the most exciting and dynamic job-creators in the country: NASA Stennis Space Center. To expand the economic benefits to the two state region from this economic driver, there is a need to market this asset to enhance the image of the region as a visitor and residential product that offers quality living and high tech, high paying sustainable job opportunities. The goals is to generate new residential home sales and rebuild the lost population to drive new business income, sales taxes and jobs to the region. NASA Stennis Space Center is already a significant source of employment and income in the region. The direct economic impact of the center on the 50 mile radius surrounding the center is $619 million. The direct global economic impact is $940 million. With a total workforce of 5,128 and average annual salary with benefits estimated at $87,000, it is an envious place to work. The skill set is primarily scientific and technical with the majority of the personnel holding bachelor degrees and higher. The Navy is a growing sector at Stennis. This represents a great opportunity for Stennis to expand its resources and create new jobs for Mississippi and Louisiana. The Navy already employs over 2,500 at Stennis and consolidating Mission Control Centers for Autonomous Underwater Vehicles and growing the SBT-22 presences will create even more jobs. Following the Gulf Oil Spill, the International Economic Development Council (IEDC) released a Marketing Strategy Plan for the Stennis-Michoud Technology Corridor, funded by Economic Development Administration. The purpose of the report was to help build the economy through collaboration to grow and sustain Mississippi. Through this proposal, we recommend that Restore Act funding be provided to Partners for Stennis, a two state regional non-profit with a 15 year track record, to manage the implementation of this three year Workforce Marketing Campaign for the NASA Stennis Space Center Technology Corridor. The NASA Stennis Region is in need of a clear and articulate implementation plan to raise awareness of the regionâ€™s strongest technology assets located in and around this technology corridor. This	Stone,Hancock,St	Yes	No	No		Yes	No	No	No	Yes		$ 1,486,000.00	$ -	
	Workforce Development	4282	1/2/2015	Classrooms and dormitories for the Center for Marine Education & Research (CMER) in Mississippi.	INTRODUCTION: The Institute for Marine Mammal Studies (IMMS) is a non-profit 501 (c) (3) organization dedicated to marine education, conservation, and research of marine mammals and sea turtles in the northern Gulf of Mexico. It operates a premier, state-of-the-art Center for Marine Education and Research (CMER) in Gulfport, Mississippi. It is the only facility on the Mississippi Gulf Coast that has the capability and expertise to care for sick and injured marine mammals and sea turtles while providing opportunities for marine education and research. IMMS serves as a liaison between public and private entities interested in marine mammal science and has partnered with the University of Southern Mississippi, Jackson State University, Louisiana State University, University of South Alabama, and the Mississippi Department of Marine Resources (MSDMR) to fulfill the state and federal needs regarding marine education, research, and response to and care of stranded marine mammals and sea turtles. IMMS also played a central role in the response to the BP oil spill in the northern Gulf of Mexico. Information on the programs and activities of IMMS can be obtained from its web site: www.imms.org REQUEST: IMMS proposes to construct dormitories and additional classrooms at the CMER in order to enhance research and educational programs and activities. This would allow IMMS to better collaborate with graduate students and scientists from the U.S. and abroad by providing inexpensive accommodation. IMMS works with nearby Universities and would like to expand its collaborative efforts to include other Universities in Mississippi which are located up to six hours away. The proposed dormitories would allow students and researchers from these Universities to contribute to the research efforts that are being conducted by IMMS in conjunction with MSDMR. Furthermore, it would allow us to house high school students from all over the state for educational camps, fieldtrips, and overnight activities throughout the year. This would greatly extend the educational outreach that IMMS is currently able to provide to the Gulf Coast and the State of Mississippi. The proposed project will not only benefit IMMS. It will provide additional support for MSDMR and the State of Mississippi by enhancing marine education, research, conservation, and instilling the importance of good stewardship in future generations. IMMS currently has the land and the necessary infrastructure (e.g., roadways, utilities, etc.) in place to start the project.		Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -	

	Workforce Development	4291	1/5/2015	MS Gulf Coast Work-Ready Community Program	Resilient communities, coastal preservation, conservation, preparedness, recovery and sustainability within any geographical region are dependent upon a strong economy and thus a highly qualified workforce. In turn, a highly qualified workforce depends upon comprehensive, coordinated, integrated and regional workforce training programs. Such workforce training programs must provide a range of skills development opportunities beginning with basic competency and employment levels and culminating with recognized credentials. To meet the workforce training program needs of the Mississippi Gulf Coast region (Harrison, Jackson and Hancock counties), the Mississippi Development Authority (MDA), in partnership with Mississippi Gulf Coast Community College (MGCCC) and Pearl River Community College (PRCC), proposes the Mississippi Gulf Coast Work-Ready Community Program. The goal of the program will be to cultivate a more highly qualified workforce on the Mississippi Gulf Coast by creating a new and innovative workforce training program within the three coastal counties. The Mississippi Gulf Coast Work-Ready Community program will be an open-entry, competency-based exit program. Open to all coastal citizens, the program will place emphasis on developmental skills training (math, reading, writing), employability skills training (interview skills, resume writing skills) and skills specific to local/regional industries. A credential that is specific to the local/regional area and its industries will be developed and offered to program participants. The program will be designed as a â€œpathways program.â€ The training program and resulting credential will position participants to undertake multiple pathways upon program exit. Participants may enter employment, may enter subsequent workforce training programs or may enter other educational programs such as, but not limited to, credit-based career and technical programs at either MGCCC or PRCC. The proposed project aligns well with Mississippi Works, an economic development initiative of the Governor of Mississippi and the workforce development goals of the GoCoast 2020 Commission. All agencies within the Mississippi workforce development structure will be sought as program partners in order to achieve the necessary and comprehensive coordination that will be required to sustain the program and insure successful employment of program participants. The program will be developed over a six-month time period and deployed in ongoing training sessions within the three coastal counties over a two-year period. Specific objectives and desired outcomes are as follows. Objective 1: Creation of an open-entry, competency-based exit training program. Activities will include working with MGCCC and PRCC and coastal business and industry to develop and/or identify an industry-specific and recognized credential, identifying and developing curriculum and learning outcomes, identifying training locations, appointing industry partners to an advisory team and developing a recruitment and admissions plan. Job requirements for program staff will be developed and program staff will be hired as part of this objective. Outcomes of these activities will include the partnership of MDA, MGCCC, PRCC and industry partners, employment of program staff, curriculum and learning outcomes acknowledged, training locations identified, appointment of an advisory team and a uniform recruitment and admissions process. Objective 2: Implementation of the Work-Ready Community program. Activities for the implementation objective will include the hiring of instructional staff, modification of classroom and laboratory spaces, selection and purchase of training equipment, supplies and instructional materials, developing the instructional schedule, implementing the recruitment plan, the intake and processing of applications, acceptance of program participants and initiation of program instruction. Outcomes of these activities are qualified instructors, classroom and laboratory space is furnished and equipped,	Harrison, Jackson,	Yes	No	No		Yes	Yes	No	Yes	No		$ 3,500,000.00	$ -	create new curriculum
	Workforce Development	4292	1/6/2015	Public/Private Training Partnership Program	The Mississippi Development Authority (MDA) proposes to establish a Public/Private Training Partnership Program to provide workforce training in Hancock, Harrison, and Jackson counties through state institutions of higher learning, community and junior colleges, and Workforce Investment Network job centers ("Training Providers"). Funds will be used to support high-impact workforce training partnerships between Training Providers and approved private companies, public entities, and not-for-profit organizations. The program will focus on college students and recent college graduates by providing internships and training opportunities with companies and organizations located in Hancock, Harrison, and Jackson counties. Workforce training under the program may include internship programs, occupational skills training, and educational training including workplace literacy, basic skills, and soft skills.	Harrison, Jackson,	Yes	No	No		Yes	Yes	No	Yes	No		$ 2,000,000.00	$ -	
	Workforce Development	4296	1/8/2015	Mississippi Gulf Coast Fiber Ring	Currently, the Mississippi Gulf Coast lacks a comprehensive fiber network engineered to be survivable in the event of a natural disaster and to support limitless economic development. C Spire proposes to build a redundant, survivable fiber optic ring for the Mississippi Gulf Coast to provide both a backbone network for the Coast as well as fiber connectors to commercial and residential cores across the coastal region. This network would provide the infrastructure necessary to support economic development projects of unlimited size anywhere in this region and to provide fiber Internet connectivity for existing large, medium, and small businesses as well as coastal residents.	Hancock,Jackson,H	Yes	No	Yes	100	Yes	Yes	No	Yes	No		$ 20,000,000.00	$ -	
	Workforce Development	4297	1/8/2015	Gulfport Downtown Tourist Destination/Alley Streetscape Project - The Half Street Alley Project	Gulfport Downtown Tourist Destination/Alley Streetscape Project i.e. â€œHalf Street Alley Projectâ€ In the tradition of Printers Alley in Nashville, Pirates Alley and Exchange Place in New Orleans, and the Alley Station in Montgomery, AL., Gulfport, MS is seeking to develop the downtown alley between 26th Avenue and 27th Avenue into a true outdoor public entertainment and arts destination. Currently used for utility and waste removal purposes, the alley has received a design study by Tom McGilloway of the firm Mahan Rykiel Design, Baltimore, MD and Randy Wilson of Community Design Solutions, Columbia, SC., the nationâ€™s leading â€œNew Urbanismâ€ alley Redevelopment designers. The team has repurposed and designed alleys in New York City, Austin, TX, Seattle, Portland, Chicago, and Atlanta and are now focused on opportunity in Gulfport, MS. Their assessment is that the location in Historic Downtown Gulfport will have a transformational effect in the heart of the entertainment district, creating a safe, attractive and highly desirable appeal to the character of downtown. Major design queues will be to streetscape the surface with new brick pavers, drainage systems, arched signage at each entrance, various and eclectic lighting treatments, creative and unique art installations and displays, bamboo planters, benches and seating areas and dedicated areas for the restaurantsâ€™ outdoor dining areas. Also, to address a balance of utility and desirability/sanitation, the current 40-yard compactor in the alley will be replaced with a small dumpster corral that will attractively fence off four 2-yard size dumpsters that will be on casters providing ease of access for Waste Pro to remove-dump-replace the containers on a daily basis. Based on recommendations and having the endorsement of the local Director of the Department of Health, the corral area will be against one of the alley walls, fenced off on a concrete pad with sewer drainage and hot and cold water for safe clean up and maintenance of the area. This new attraction will directly increase traffic in this pedestrian friendly area to 6 locally owned restaurants that will have back door and/or courtyard access to the newly transformed â€œHalf Street Alley. The Gulfport Main Street Director will be responsible for providing outdoor dining area events, public art displays, poetry readings and musical entertainment. It will also allow for the development of new small businesses in our downtown area by creating a new synergy of art and entertainment. Currently, the alley is an eyesore, a health and safety hazard, and quite possibly the worst maintained area in all of Downtown Gulfport. With the development of â€œHalf Street Alleyâ€ not only will we correct and clean up a blighted area, we will create a destination that young and old will be able to visit to view public art contests, eat, drink, be entertained and most importantly, be proud of the continued growth and rebirth of Downtown Gulfport. To accomplish the transformation of the alley, Gulfport has dedicated approximately $317,000 from CDBG monies from the Mississippi Development Authority to the above ground alley project which would include lighting, street pavers, electrical. To complete the project, we are seeking an additional $350,000 to replace the aging sewer infrastructure that runs the length of the alley, engineering costs, concrete replacement and other infrastructure needs. This funding would complete all the necessary below ground infrastructure in order to complete the project properly the first time. Currently, there are 33 locally owned restaurants and entertainment establishments that are all and small businesses that have opened or renovated and reopened since Hurricane Katrina. The City has used over $10 Million in CDBG for one of the nationâ€™s largest streetscape and faÃ§ade grant projects resulting in a resurgence and rebirth of Downtown Gulfport. The â€œHalf Street Alleyâ€ Project is the project that will differentiate Downtown Gulfport from any other along the coast, offering a true destination that attracts more patrons to our small businesses, improves a currently depressed area and creates a unique public space tourist and locals alike will be drawn to.	Harrison	Yes	Yes	Yes	55	Yes	Yes	No	Yes	Yes		$ 1,500,000.00	$ 317,000.00	
	Workforce Development	4298	1/8/2015	ONE COAST Scenic By-ways and Relocation Campaign	It is recommended that $2,019,250 in Restore Act Funds be utilized to launch a ONE COAST Scenic Byways and Relocation Campaign to drive tourism and real estate sales. A decade in the making, Beach Boulevard in Hancock County, is the only shoreline along the MS Gulf Coast that has received the designation as a Mississippi Scenic By-way. The vision for a scenic byway did not stop at the 13 miles of shoreline in Hancock County. The 30 miles in and around NASAâ€™s Stennis Space Center buffer zone, an untouched natural green space that can never be developed , is now part of the By-ways to Space. The buffer zone—a natural haven for birding, biking, fishing, camping and exploring—is not only a national asset for homeland security and defense, but also for the emerging new eco-tourism product of the Mississippi Gulf Coast. Work is underway now to connect the beach boulevard by-way to the rest of the Gulf Coast by naming Highway 90 in Harrison and Jackson counties as Scenic By-ways, to celebrate the 100th Year Anniversary of the Old Spanish Trail. During 2015, the by-way will extend into Harrison County up to Debuys Road. There is interest from Jackson County leaders to extend the by-way there and in Biloxi, segmentation may be required to carve out the Casino Districts. A Mississippi Scenic Byway designation can benefit a community in several interrelated ways: Resource protection; Community recognition as a source of pride; Economic development/tourism through visitor kiosks, vista spots to serve tourists; Community visioning to address roadway corridors and land use issues; Partnering by bringing individuals, land owners, the public and private sector to partner for betterment of the community; Access to federal and state grants, trusts, loans and assistance programs for safety improvements, facilities, improvements to access areas, protecting historical and cultural resources. The mission of the Mississippi Coastâ€™s two new scenic byways is to preserve, enhance, protect and promote the natural, historic and cultural tourism intrinsic values of 62 miles of scenic roadways for the enjoyment and education of the American public. The goal of the scenic by-ways programs is to introduce the Byways to Space and the Beach Boulevard Scenic Byways to the public by: â€¢ Taking advantage of the INFINITY Science Center, a Mississippi Tier I tourist attraction that opened in mid April 2012 that has a focus on the science of land, sea, and outer space. â€¢ Using the Byways to Space and the Beach Boulevard Scenic Byways, and the intrinsic resources along these byways, as an â€œoutside laboratoryâ€ where people can have a hands-on experience with what they have learned about inside the INFINITY Science Center. â€¢ Providing electronic and static information to the public to plan their visit to the byways, to actually guide the public around the byways, and to provide visitor information at various locations on the many intrinsic resources located along the byways. â€¢ Involving the public in the potential expansion of the byways to provide more of a seamless visitor experience. Promoting the cultural and heritage tourism of the area is the catalyst needed to increase visitation, new business income, tax revenue and jobs for the region, using the INFINITY Science Center as the mechanism to draw the estimated 300,000 annual visitors off the Interstate and into the communities surrounding the Center. Connecting the Scenic Byways to Space to the Beach Boulevard Byway will draw the visitors from the Interstate into the cities of Waveland and Bay St. Louis and ultimately across the Coast as a preferred tourism route, thereby generating tourism activity throughout the	Hancock,Harrison,	Yes	Yes	Yes	50	Yes	Yes	Yes	Yes	Yes		$ 2,019,250.00	$ -	
	Workforce Development	4299	1/9/2015	Mississippi Gulf Coast Business Resource Centers	Mississippi Gulf Coast Business Resource Centers Entrepreneurial support is one of the keys to positioning communities for economic success in tough times. With the economy struggling to get back on track following Katrina, the Gulf Oil Spill, Isaac and the recession, there was and still is a need to fuel the small business engine by giving entrepreneurs and companies the support they need to re-open their doors, recover, expand and hire more workers. When the Deep Horizon Oil Spill hit, the Hancock Chamber of Commerce was poised to launch the business resource recovery center, using the Katrina model as a template. In the aftermath of Hurricane Katrina, the Hancock Chamber of Commerce was on the ground immediately providing technical assistance to businesses. Through a Gulf Oil Spill Grant grant from the Economic Development Administration, the Hancock Chamber of Commerce together with the Hancock Community Development Foundation and the City of Bay St. Louis established a Regional Business Resource Recovery Center (BRRC) for the Mississippi Gulf Coast and managed the center from July 2011 â€“ December 2013. In 2013, the Hancock Chamber was awarded the Community Economic Development Award for this program by the Mississippi Economic Development Council. The center has now become dormant due to lack of funding. Through this proposal, we recommend that a total budget of $8.4 million be allocated from the Restore Act Funds to fund a Mississippi Gulf Coast Business Resource Center Program. Using the Hancock Chamber Model, we propose to Develop a Small Business Task Force & Business Resource Center in each county, using existing Chambers of Commerce to bring all key stakeholders together to: Stabilize local businesses; • Stabilize jobs and incomes for individuals; • Stabilize community structures; • Rebuild community, business and consumer confidence; • Set targets and timelines; and, • Identify existing plans and resources. We also plan to target specific challenges: • Business retention & expansion;	Jackson, Hancock,	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 8.40	$ -	
	Workforce Development	4300	1/9/2015	Creation of Pearl River Community College Campus in Hancock County	Create a campus for PRCC in Hancock County for seafood research and aero space technology. This is of utmost importance, not only for the Mississippi Gulf Coast but for the state at large. We need to develop our workforce in Hancock County.	Hancock	Yes	No	No		Yes	Yes	Yes	No	Yes		$ 15.00	$ -	

	Workforce Development	4304	1/26/2015	I-10 Connector Road - Phase 1	The Jackson County Board of Supervisors is proposing the development of a new connector road parallel to Interstate 10 between Mississippi Highway 15 and Mississippi Highway 609. The proposed route will be located north of the interstate and will provide access to existing commercial property, as well as large tracts of developable land within the corridor. The proposed I-10 Connector Road will be built initially as a three lane divided roadway with sufficient right-of-way for expansion to a five-lane section with two eastbound lanes and two westbound lanes separated by a continuous left turn lane. The new route will be functionally classified as an Urban Arterial and will provide a continuous east-west route between two state routes with interchange access to Interstate 10. The new corridor will incorporate a one mile section of Cook Road and approximately 1,100 feet of the Thomas Street right-of-ways. On the west end of the project, roughly 3,900 linear feet of new right-of-way will be acquired to provide a connection at Mallette Road and Daisy Vestry Road. On the east end, the route will diverge from the Cook Road right-of-way to connect to Tucker Road about 800 feet north of its current location. The signalized intersection at Cook Road will be relocated to the new intersection location with traffic control measures instituted at Cook Road and Tucker Road to control traffic movements. The new I-10 Connector Road will continue north for about 1,000 feet in order to connect with Seaman Road. The preliminary estimate for the construction of the initial phase is $13.7 million which includes: â€¢$5 million for Right-of-Way â€¢$8.7 million for Construction At this time, $8.75 million has been assigned to the project through the following: â€¢Federal Funds through SAFETEA-LU Legislation of 2005 â€¢Earmark in FY2008 Transportation HUD Appropriation Act â€¢Earmark in FY2009 Omnibus Appropriation Act â€¢Earmarks in FY 2010 Therefore an additional $5 Million is requested through RESTORE Act funding.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 13,700,000.00	$ 8,700,000.00	
	Workforce Development	4305	1/26/2015	A Hancock County Aerospace and Workforce Academy	Aerospace is a staple on the Mississippi Gulf Coast, despite the lack of comprehensive aerospace and industry-related training programs from both the academic and workforce training perspectives. The Pearl River Community College (PRCC), which services Hancock County, and the Hancock County Port and Harbor Commission (HCPHC) have the will, need and wherewithal to make such a comprehensive training program a reality. With PRCC's existing academic and workforce training acumen and HCPHC's land strategically located on the Stennis International Airport airfield, a very successful partnership can be formed, if it is supported by Restore Act Funding in an estimated amount of $10 million for constructing a multipurpose 43,100 sf. facility and related parking, apron and taxiway and an estimated $3.1 milion for a three-year operational start-up period. Hancock County, which is home to Stennis Space Center and Stennis International Airport, has robust aerospace activity in both the private and federal sectors with twelve industries in the private sector alone, and coast wide there are 25 aerospace industries, with an untold amount of smaller support business with industrial training needs. While there is strong sector activity, lacking are the components that would create a true industry cluster and a major factor in cluster development is the existence of a universities and colleges supportive of that activity. Once a strong industry cluster is in place, synergies are created that are hard to easily duplicate in other regions. PRCC and HCPHC wish to enhance the Gulf Coast's existing competitive advantage with the creation of an aerospace and workforce academy that would provide the academic, workforce training, and networking components that weave the threads of synergy even tighter for aerospace in Hancock County.	Hancock	Yes	No	Yes	15	Yes	Yes	No	Yes	Yes		$ 10,000,000.00	$ -	similar to ID
	Workforce Development	4319	2/20/2015	Requirements Analysis and System Architecture Definition for an Operational Ocean Observation and Modeling System	The Gulf of Mexico living coastal and marine systems are experiencing stress from man-made disruptions including the Deepwater Horizon incident and natural phenomena, including severe storms, sea level rise, coastal depletion, hypoxia and compromised water quality. Decision makers have not been afforded with the actionable information and knowledge needed to make well informed decisions in interest of the public and the associated businesses and industries along the Mississippi Gulf Coast with regards to short and long term coastal management. Apparent in recent man-made and natural disasters is the inability to predict the effects of these events due to the lack of in-situ sensors, ability to assimilate data from all sources and modeling the effects of these events in a timely manner. Two prominent examples are the case of Deepwater Horizon, the ability to rapidly forecast the direction of the spill and Hurricane Katrina, the ability to accurately predict storm surge. Also, resulting from Deepwater Horizon was the need for baseline environmental conditions. In order to respond to these anthropogenic and natural disaster in both tactical and strategic time scales, is an operational center inclusive of comprehensive sensing, modeling and forecasting capability and the associated infrastructure along the Gulf of Mexico, specifically the Mississippi Gulf Coast, to adequately respond to these environmental conditions occurring at temporal scales from hours to decades and spatial scales from meters to kilometers. Proposed is to document requirements for a sustained operational center, from observations to decision products, and develop and end-end Concept of Operations (CONOPS) for MS RESPONSE. This would be based on requirements from all stakeholders to include, but not limited to, the Mississippi Department of Environmental Quality (DEQ), Department of Marine Resources (DMR) and other local, state, and federal. From an economic development perspective, â€œBlue Economyâ€this will include industry located on the Gulf Coast and outside will be interviewed to determine requirements for a test-bed that would attract industry to locate on the Mississippi Gulf Coast. Federal Agencies will be interviewed to determine their requirements, including test-bed and range requirements. This will include but not limited to Office of Naval Research (ONR), Commander, Naval Meteorology and Oceanography Command (CNMOC), Naval Oceanographic Office (NAVOCEANO) and National Oceanographic and Atmospheric Administration (NOAA). It is fully recognized this is not a complete list and once work is initiated many stakeholders will be added and interviewed. Based on all assimilated requirements a CONOPS for MS RESPONSE operational center will be developed. This will be an all-inclusive end-to-end system of sensing and modeling requirements, IT architecture, specific sensors, optimal sensor locations, communication pathways, and shore facilities. The CONOPS will be made scalable according to requirements and estimated long-term sustainment funding availability. The deliverable will include a complete analysis of the derived benefits of bringing industries and jobs to Mississippi Gulf Coast by implementing recommendations.	Hancock,St Tamm	Yes	No	No		Yes	Yes	No	No	No		$ 1,475.00	$ -	
	Workforce Development	4331	3/5/2015	Identifying Mississippi Businesses for RESTORE Projects	Under the RESTORE Act, funds will be disseminated to a number of entities for projects involved in conservation, coastal activities and economic development, and a number of other topics. The goal of these projects is to create a Mississippi coast economy that is thriving, with an approach to coastal activities that supports ecosystem sustainability and coastal resilience. Key to RESTORE project success is involvement of local Mississippi companies as these projects are conceived and planned, carried out, and monitoring mechanisms are established. The Mississippi Enterprise for Technology (MSET) serves as a conduit to local and regional small businesses. MSET proposes to assist RESTORE Act coordinators in identifying Mississippi and other regional companies to assist in RESTORE projects. MSET, a nonprofit organization based at Stennis Space Center, is funded by state and federal agencies to, in part, assist companies in finding business opportunities. The organization routinely connects small businesses with federal agencies and large prime contractors for opportunities that range from construction to high-technology research and development. This is accomplished by a number of mechanisms that include networking events, opportunity presentations, business matchmaking, e-introductions, and email distributions. The goal of these activities is to get as many local companies involved in supporting federally funded projects and programs at Stennis, in the region, and across the nation. Through the course of the last several years, MSET has developed a substantial database of local companies â€“ our emails are distributed to nearly 3500 people in the local area (and some from outside the region). These companies consist of suppliers, service providers, technology companies, construction companies, engineering firms, consultants, and other organizations that might assist in larger projects associated with RESTORE funding. MSET proposes to use this archive of companies to assist RESTORE projects in keeping as much of the work in the local area, supporting the development and/or expansion of small Mississippi companies. As an example of how MSET could support a project as it gets started, a wetlands monitoring project can be used. This project will require equipment, field work, data collection, possibly lab work, data manipulation and database support, as well as reporting. MSET would assist in identifying capable small companies to assist in these efforts, focusing on Small Disadvantaged Businesses. Additionally, MSET would assist in identifying the local assets, such as the laboratories at NASA that might be used to support the work, so no expensive re-creation of existing capabilities occurs during the project that cannot be sustained. MSET can serve as a connection to the federal agencies at Stennis to understand where their assets might be used in RESTORE projects. As RESTORE Act projects and their funding winds down, there will be the need for some follow-on work such as monitoring or routine data collection or other continuing activities. MSET will assist in identifying commercial entities that can support these sustained activities. For example, one of Mississippiâ€™s research universities may be involved in an initial RESTORE effort under which some technologies are developed. MSET will support the transfer of that technology out of the university and into a company that will bring it to the commercial market. MSET has various programs that support such activities, including a Business Incubator Program, Technology Transfer Programs, a Minority Business Program, business coaching, and others. Additionally, through relationships with other nonprofits, MSET has access to support for entrepreneurs and small companies looking for investment capital, for export opportunities, and for expansion into new markets.	Hancock	Yes	No	No		Yes	No	No	Yes	No		$ 90,000.00	$ -	
	Workforce Development	4337	3/11/2015	Back Bay Biloxi Shoreline and Habitat Restoration	Project will restore shoreline area, ensuring growth of emergent plants including Spartina, Juncus, and other grasses and trees that have been lost to erosion. Several acres will receive remediation and land will be extended to include a narrow beach that has been lost due to increased force of wave action. The select means of restoration will improve conditions for more than a dozen endangered species in the area as shown in this proposal.	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	health & s	$ -	$ -	
	Workforce Development	4343	7/24/2015	West Jackson County Constructed Wetlands Restoration Project	The West Jackson County Constructed Wetlands Treatment System was established in in 1990 to treat the centralized wastewater collected in western Jackson County, Mississippi. As wastewater passes through multiple cells of wetland vegetation, excess nutrients, heavy metals, and other environmentally harmful contaminants are removed from it prior to release into Costapia Bayou. In addition to wastewater treatment, the wetlands are a favored habitat for a variety of wildlife and serves as a complementary habitat to the adjacent MS Sandhill Crane National Wildlife Refuge. Due to the concentration of birds in these wetlands, we formed an agreement with the National Audubon Society to open the facility for avian observation and counting every Thursday. For the last several years, the wetland vegetation has been decimated by the invasive apple snail. Apple snails are a serious threat to freshwater wetlands and estuaries worldwide, with severe damage documented along the Gulf of Mexico coast. Consumption of wetland vegetation by the apple snail has led to drastic reductions in the wastewater treatment efficiency and wildlife habitat. The main objectives of this proposal are to restore the functionality and habitat provided by this treatment wetland through eradication of the apple snails and restoring of vegetation. The Jackson County Utility Authority has begun efforts to remove apple snails under monitoring by the MS Departments of Environmental Quality and Marine Resources. However, limited resources have hampered these efforts. We would like to expand upon these activities by researching and implementing the best methods for removing apple snails, followed by replanting of the wetland vegetation using peer-reviewed methods to maximize habitat and water treatment. Throughout all steps in this project, water quality, percent coverage of vegetation, and snail abundance will be quantified to determine the benefits of restoring this wetland. We will also implement outreach activities by using this site as a demonstration and education project that will be open to the public, for guided tours, on select days. The expected outcomes from this project are preservation and restoration of wetland habitat, increased wastewater treatment efficiency, improved water quality, significant contributions to knowledge base for the control of apple snails, and workforce development through hiring and training of new employees to address this problem and funding graduate research.	Jackson	Yes	Yes	Yes	62	Yes	Yes	No	Yes	No		$ 650,000.00	$ -	

	Workforce Development	4348	4/13/2015	Lady Fab Trio (travel, higher education, and health management)	The â€œNHR Blueprint Foundationâ€ is a 501c3 non-profit organization working to address the specific needs and problems associated with young women. Established in 2013 in Diamondhead, MS, with the business office in Gulfport, MS, our mission is to aid our community in launching eradication of disparities amongst women. We aim to emphasize encouraging young women to stay in school, pursue entrepreneurship and travel, and be fabulous! Our goal is to encourage young women to pursue broader horizons in career and travel, including obtaining passports, dressing for success, higher education, health management, and free enterprise. Our vision is to spearhead a generation of young ladies more cognizant of opportunity, healthy living, and the benefits of versatile travel. We hope to connect with every community from the Gulf Coast to Jackson to encourage the attitude â€œdonâ€™t view me as a princess, see me as Presidentâ€ In staying keeping with our goals of travel, higher education, and health management, the Lady Fab Trio encompasses three programs: Operation Worldly Girl, Heart Beat to the Beat, and Medical Room Ready. â€œOperation Worldly Girl (OWG)â€ is a program that will assist high school female juniors and seniors in receiving passports and acquiring knowledge of foreign opportunities, and bring that experience back to benefit the state of Mississippi. We will contract with the local passport office to have staff on site to process selected young ladies. The event will embody guest speakers that will introduce ladies to study abroad opportunities, internships, summer and senior trips. Though the initial phase will only promote travel to the Caribbean and Canada, the goal is for OWG to become an annual program that will enlist representatives that will provide young ladies with opportunities in Europe and Asia. OWG will offer many fun and informative programs catering to young women. This includes guest speakers, workshops, games, international foods luncheon, dress for success make-overs, demonstrations, and many other activities. We will provide accommodations for our guest speakers, honorarium, certificate of completion for the young ladies, passport photo taken onsite, and processing of passports. This program will be offered free to local high school juniors and seniors, with prequalification/selection prior to the event. OWG, with food and activities for young ladies of the Gulf Coast Region, will allow us to put on a program educating girls on disparities, self-esteem, diversity, and entrepreneurship. â€œHeart Beat to the Beatâ€	HB2B) is a cardio dance workshop seeking to identify past attitudes and behaviors regarding exercise and diet in mothers and their daughters. We will seek to identify historical aspects of family exercise and meal planning in Harrison, Jackson, and Hancock County, MS. With the onset of popular tv programs such as BRING IT and SO YOU THINK YOU CAN DANCE, HB2B will provide a one day cardio dance camp, instruction on how to implement the cardio into a daily routine, heart healthy lunch, and awards ceremony with certificate of completion. Instructors from the Purple Diamond Dance Team, as seen on TV, will lead the workshop. We seek to evaluate overall physical activity, and to identify mothersâ€™ goals for the future health of their children. The learned results will be compiled and analyzed, and used as evidence based literature for the eventual development of a target program. Though only secured enough donations to hold HB2B once, our wish is to make it a quarterly event, because the popularity and response was TREMENDOUS, and we had to turn many young ladies away. â€œMedicine Room Readyâ€	MRR) â€“ In recognizing that not every young lady is meant for a university tenure, but still would like a career, we would like to introduce MRR. MRR is a program that will be offered to high school academically inclined students to pursue and receive their LPN certificate upon graduation. This has been implemented in various high schools throughout the US, but		Yes	No	No		Yes	Yes	No	No	No		$ 750,000.00	$ -	
	Workforce Development	4370	5/28/2015	USM Gulf Park Beachfront Pier Restoration	The University of Southern Mississippi's Gulf Park campus is the state's only beachfront campus. This campus had a fishing/recreational pier extending out into the Gulf of Mexico for many years. The pier offered academic, research and recreational opportunities for students, faculty, and staff as well as local residents and tourists. Over time and as a result of storms and other harsh events, the pier eventually was overcome by the elements of nature. The purpose of this proposed project is to reconstruct this pier and once again offer the direct Gulf access that had been in place for the above mentioned Mississippi residents and other stakeholders for many years. Also, with USM's growth in the areas of marine and coastal science, this pier will be a critical academic and research resource for Mississippi's premier university marine related programs.	Harrison	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ 1,500,000.00	$ 50,000.00	
	Workforce Development	5378	7/7/2015	Intelligent Communities: Helping rural communities transition to, plan for, and prosper in the digital age	The Mississippi State University Extension Intelligent Community Institute helps rural communities transition to, plan for, and prosper in the digital age. The Institute, in partnership with local champions, schedules a series of presentations to increase awareness of what the implications of the digital age are for rural communities. The next step is the community completing a checklist that will serve as a benchmark and plan to move forward. The Institute coordinates resources to address the needs identified in the checklist report. For example, helping communities with their online presence, deploying or enhancing robotics to help with their knowledge workforce, increasing telehealth awareness, providing digital literacy workshops, etc. The ultimate objective is to help rural communities become intelligent. An intelligent community is one that understands the challenges of the digital age and takes conscious steps to prosper in it. If funded, this proposal will target both coastal communities as well as more rural communities to the north and help them transition to the digital age. This goes hand in hand with Governor Bryant's plan to increase broadband connectivity on the coast. Broadband connectivity is but one component that needs to be coupled with education and awareness to better use the technology. The Intelligent Community Outreach achieves precisely that.		Yes	No	No		Yes	Yes	No	Yes	No		$ 150,000.00	$ -	
	Workforce Development	5383	7/31/2015	MS Gulf Coast Economic Development Data Project	Project summary Southern Mississippi Planning and Development District will create and maintain a one-stop resource for consistent, accurate, up-to-date data across the Mississippi Gulf Coast counties of Hancock, Harrison and Jackson. It will be designed with input from and for use by professional economic developers, local governments, tourism bureaus and others actively seeking to create new jobs, grow existing business and stimulate more wealth along the coast. A standardized approach to data collection will benefit the entire region. Data collection input and display Data collected will be organized and maintained in a geospatially-enabled database management system. SMPDD will use a dedicated GIS server and provide user login and password-protected access for authorized users. One of the major features and benefits of this solution will allow continuous access to the most updated data, as the server will retrieve data directly from the working database. The data may be displayed in static tables or in user-generated tables, allowing online map viewing and hard copy downloads. Data categories and areas of research SMPDD will seek input from the professional economic developers to determine the fields for the database. Some data may be available on a public domain and other data may be purchased. Topical areas may include but are not limited to â€" â€¢ Population and projections â€¢ Growth patterns â€¢ Building permits â€¢ Workforce/labor â€¢ Infrastructure â€¢ Real Estate and property tax Potential partners We will seek and anticipate cooperation with â€" â€¢ County and municipal governments â€¢ Gulf Coast Business Council â€¢ Gulf Coast Economic Development Alliance â€¢ Gulf Regional Planning Commission	Harrison, Hancock	Yes	No	No		Yes	Yes	No	Yes	Yes		$ -	$ -	
	Workforce Development	5386	8/11/2015	Airport Development Site Preparation	Background: It is vital for Airports to develop alternative forms of revenue. The Gulfport-Biloxi International Airport owns, and has identified three acres of land, as a premier location for future commercial development. This land is located at the entrance of the Airport adjacent to parcels that contain two hotels and a business office park. In order for this land to become appealing for future development, it is required to be elevated to a similar grade as contiguous parcels. Discussion: The project area, that is located west of two Airport Hotels, requires site preparation in order to make it â€œshovel readyâ€ The site preparation consists of the purchase of mitigation credits, clearing the area, installation of utilities, and fill to bring the area to grade with adjacent property. By using grant funds, it will entice private investment of construction that compliments the amenities for Visitors to the Mississippi Gulf Coast and also Residents of the Mississippi Gulf Coast. Summary/Benefit to Region: The Airport is a key component of the economic well-being of Southern Mississippi. Capital growth and capital investments are critical for Airports and Communities. The site preparation of the commercial site will set the stage for private investment to construct a commercial development which then equates to the growth of local jobs, taxes and alternative revenue to the airport. Project Cost: The cost for 3-acre commercial parcel site preparation is $725,151.25	Harrison	Yes	No	Yes		Yes	No	No	Yes	Yes		$ 725,151.25	$ -	
	Workforce Development	5388	8/30/2015	Developing Grassroots Ideas for the Purpose of Building a Sustainable Economic Engine by Finding Innovative Ways of Restoring Gulf Coast Industry and Reinvesting in Existing and New Business Development	Executive Summary The proposed plan outlines a multi-faceted approach to developing a Community-based High Technology Laboratory capable of producing an â€œEconomic Engineâ€ resulting in innovative approaches to developing for-profit businesses and industry, future products to capture retail trends, and innovations in green technologies in order to produce sustained economic and community development in targeted impoverished regions. The Coastal cities and Counties sit at the epicenter of the slowest recovery from the effects of natural disasters and economic and community development in the State of Mississippi. Hancock, Harrison, Jackson Counties in Mississippi are parts of the coastal Region which severely suffers from challenges in business development, economic disparities, poor school systems and inadequate predictable measures for warning evacuees and responders during disaster events. A multi-faceted approach capable of maximizing existing resources while creating an effective â€œEconomic Engineâ€ needed to stimulate job creation in the targeted region. This engine has to be strong enough to â€œdriveâ€ a consistent level of development while creating tools that will produce short-term, mid-term and long-term results. The Transocean and BP settlements can be effective â€œDriversâ€ in order to have create the flexibility to assess outcomes and effectively change course to achieve set objectives capable of sustaining effective economic growth. We believe the goal in the Coastal region should be to create a viable, productive and growing economy capable of maximizing its rich assets. The Living Word High Technology Renewable Energy and Business Development Incubator (HTREBDI) can be the catalyst needed utilizing SBS Laboratories to effectively â€œdriveâ€ economic and community development in the Coastal region.	George,Jackson,St	Yes	Yes	Yes	25	Yes	Yes	Yes	Yes	Yes		$ 10.00	$ -	

	Workforce Development	5399	9/2/2015	Point Cadet Revitalization from Highway 90 Bridge to I-110 Corridor along the Back Bay of Biloxi	This comprehensive project will revitalize waterfront areas of East Biloxi from the Highway 90 Bridge north and west to the I-110 Corridor through multi-use improvements to enhance and restore natural resources, create jobs, support the seafood and maritime industries, and expand family-oriented attractions to extend visitors' stay on the Mississippi Gulf Coast. Throughout the project area, the City will provide safe, convenient public access to the shoreline and will enhance traditional working waterfront activities with a variety of land uses that showcase local seafood through shopping, dining, entertainment, and educational venues. RESTORE grant funds will be used as part of a public investment strategy to yield a long-term increase in value by revitalizing the Back Bay shoreline east of the I-110 Corridor and adjoining Old Biloxi neighborhoods by enhancing public access to the waterfront and revitalizing the seafood industry through public improvements that will include expanded commercial dock space and supportive landside amenities. The project will include incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program. Redevelopment of the project area, as well as of the local seafood industry, has been particularly slow following its devastation by Hurricane Katrina. The Back Bay Festival Marketplace and recreational marina component of the overall project will be located at the site of the Sherman Canaan Fishing Dock, which includes approximately 15 City-owned acres at the north end of Lee Street. This public waterfront area will be reconfigured to offer a marina with recreational boat slips for temporary and long-term rental (for private and for-hire vessels); venues for retail shops and restaurants; a sailing school; and space for Mississippi Department of Marine Resources boating safety lessons and boating storage/operation. The market place will include an open-air kitchen area to showcase local seafood and to educate the public about seafood cooking methods and opening oysters, as well as facilities for workforce training in culinary arts that focuses on Gulf seafood and locally-grown/raised products. Shrimping boats currently berthed at the Sherman Canaan Fishing Dock will be relocated east to a new commercial marina that will be constructed on previously-developed property to be acquired by the City in the vicinity of Oak Street. This new marina will improve commercial boat access to Gulf channels and will offer landside improvements such as convenient off-loading areas, boat-building and repair areas, marine services and net repair areas. Pedestrian walkways will link these two activity hubs to each other and to other points of interest in the project area, including the National Register, City-owned Old Brick House and the Bayou Auguste Restoration Project, which involved a local, state and federal partnership effort to convert a neglected urban bayou into a beautiful 12-acre park. The Pine Street Waterfront Access Road and Maritime Commerce Corridor will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. Debris removal, storm-resilient shoreline stabilization measures and pedestrian access improvements along public waterfront property from the Biloxi Fishing Bridge south to and under the Highway	Harrison	Yes	Yes	Yes	80	Yes	Yes	Yes	Yes	Yes		$ 35,000,000.00	$ -	
	Workforce Development	5400	9/2/2015	Pine Street Waterfront Access Road and Maritime Commerce Corridor	The Pine Street Waterfront Access Road and Maritime Commerce Corridor in East Biloxi will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. The comprehensive project goal is to improve public access to waterfront commercial, industrial and recreational venues in East Biloxi thereby stimulating the economic growth of existing marine-related commerce, such as the shrimp boat off-loading docks at St. Michael's Fuel and Ice Dock on Biloxi Bay at the foot of 5th Street. Improved access also will stimulate redevelopment of East Biloxi through new business start-ups and the expansion of tourism and recreational waterfront amenities.	Harrison	Yes	No	Yes	90	Yes	Yes	Yes	Yes	Yes		$ 20,000,000.00	$ 1,000,000.00	
	Workforce Development	5405	9/24/2015	Expansion of Blue Crab Aquaculture in Mississippi: New Economic Opportunities for Coastal Fishery Development	A reduction in blue crab harvests and the continuing decrease in numbers of juvenile blue crabs in estuaries across the Gulf of Mexico have stimulated interest in the use of hatchery-reared crabs in stock enhancement activities (should diminished recruitment occur in the fishery) and the development of new fisheries. Mississippi is one of only two states in the U.S. with a blue crab hatchery. The ability of USM/GCRL to produce â€œseedâ€crabs has great potential for development of a bait crab fishery and expansion of the soft crab fishery. Pond culture of blue crabs would greatly reduce pressure on natural populations and would allow for fishery development independent of wild stocks. Interest in new fishery opportunities for Mississippi fishermen and inland pond aquaculture ventures led to the formation of the Mississippi Blue Crab Aquaculture Consortium. The Consortium is focused on establishing blue crab aquaculture in Mississippi, specifically the culture of small crabs for soft crabs and bait to create new domestic value-added products based on hatchery production technology.The proposed work addresses several RESTORE program areas including: 1) workforce development through training and participation in new fisheries, 2) research and technology transfer and development through partnership with the Mississippi Blue Crab Aquaculture Consortium members (USM/GCRL, Mississippi Department of Marine Resources; USDAâ€™s Mississippi Natural Resources Conservation Service; Alcorn State University), 3) aquaculture through production of a high-valued product for human consumption and a cultured bait for recreational fishing, 4) fishery economics through new fishery development, and 5) resource management through conservation of wild stocks.Re-location and expansion of the current hatchery will provide additional technical jobs as well as employment opportunities for fishermen and entrepreneurs interested in new fisheries. Inland farmers with ponds will be afforded the opportunity to culture new species. Workforce development and training will occur through outreach activities and technology transfer that will focus on pond culture techniques and marketing.	Jackson	Yes	No	Yes	30	Yes	Yes	Yes	No	No		$ 13,000,000.00	$ -	
	Workforce Development	5419	10/1/2015	Gulf Coast Economic Development Loan Fund	Founded in 2006, Renaissance, a 501(c)(3) non-profit Community Development Financial Institution Fund (CDFI), was established by a group of committed community leaders who had the vision and foresight to understand that the key to Mississippiâ€™s recovery from Hurricane Katrina (August 2005) would need to be a unified effort focused on community redevelopment. Renaissance thrived by offering programs designed to provide residents the opportunity to obtain the dream of homeownership through low-cost and low-rate lending, as well as structured financial counseling. Over time, Renaissance expanded the scope of its activities to provide both quality sustainable housing solutions and the creation of economic opportunities in Mississippiâ€™s low-to-moderate income communities. All of Renaissance programs include vital financial technical assistance and counseling in an effort to support clients throughout the process to success in wealth building and breaking out of the poverty cycles. Renaissance seeks to move residents out of poverty through its wealth-building opportunities of homeownership and small business development and/or expansion that creates and/or retains job opportunities for low income individuals. Renaissance has successfully deployed nearly $62.5M in Community Development Block Grant funds since 2009 and leveraged these funds with an additional $16M in private and public funding. These funds were not a â€œone timeâ€spend, as the mortgage payments received by Renaissance are re-deployed into the community to continue to serve the purpose of providing affordable, sustainable and safe housing for Mississippiâ€™s workforce. Renaissance is a U.S. Small Business Administration (SBA) Community Advantage lender, the only SBA Intermediary Microenterprise lender located within the State of MS and is a member of the Federal Home Loan Bank of Dallas. Through our many partnerships and affiliations, Renaissance has access to capital that can be leveraged with all RESTORE Act money awarded to the organization to further the value and reach of the funds received. In addition, Renaissance is an Aeris-rated CDFI, a designation which signifies that the organization has been found to have sound policies, procedures, electronic systems and qualified staff in place to successfully administer its programs. The Gulf Coast Economic Development Fund would bring additional capital to an existing Renaissance and would enhance the perpetual loan fund that the organization has successfully established. The funds the State will receive through the RESTORE Act and the BP Oil Spill can be more than a one-time spend. If placed with the appropriate organization, such as Renaissance, to manage and deploy in the most effective way, the funds can become an economic driver for the State, continuing to stimulate economic growth for years to come. On behalf of the Board of Directors of Renaissance and the established management team, we are requesting a $2M grant from the RESTORE Act funds to further strengthen this existing perpetual non profit loan fund, to enable this organization to continue to serve the residents of South Mississippi.	Hancock, Harrison	Yes	No	No		Yes	No	Yes	Yes	Yes		$ 12,000,000.00	$ 5,000,000.00	
	Workforce Development	5420	10/2/2015	Gulf Coast Broadband Project	The Mississippi Gulf Coast is in need of ultra-high-speed, fiber-optic, broadband infrastructure for Internet service that has sufficient scope, flexibility, availability and affordability, for all of its citizens, governments, and private businesses and industries to be able compete in regional, national and international markets for the creation and retention of new jobs, technologies, businesses, and industries and for the expansion and retention of equal opportunities for all citizens to enjoy a more prosperous, just, dignified and fulfilling life. The experience of many states and communities around the nation has been that large corporate providers of data transmission facilities do not have sufficient monetary incentive to bring affordable and ubiquitous, ultra-high-speed broadband Internet service to them unless there are significant public efforts and incentives to bring that technology to a proximity to all homes, businesses and public places that will make the final connectivity and service to all homes, businesses and public places by retail public and private service providers accessible and economically viable to the retail public and private service providers, affordable to the end users, and competitive in regional, national and world markets. The Cities of Biloxi and Gulfport established a unified effort to promote development of a minimum 1-Gig ultra-high speed Internet connectivity via a Fiber Optic Ring encompassing the entire Mississippi Gulf Coast. Subsequently, as of October 2016, eight other coastal cities and two of the three coastal counties have joined with Biloxi and Gulfport to form the Gulf Coast Broadband Initiative. With RESTORE funding assistance, the Fiber Ring will be implemented and administered by the GCBI, thereby providing to all area residents and businesses an affordable, ubiquitous and timely ultra-high-speed broadband Internet service. It will be delivered from the Fiber Ring to all end users by competitive licensing with private Internet Service Providers. The Gulf Coast Broadband Initiative has been created through an interlocal governmental cooperation agreement and is a separate legal and administrative organization with the authority to acquire any interest in real and personal property necessary to create and maintain the regional fiber optic ring in all of its parts. In order to eliminate the â€œdigital divideâ€and create equal opportunity for all residents and businesses to enjoy reasonably affordable access and use of ultra-high-speed Internet service, the Initiative may contract with for profit and non-profit business and social service entities and engage in all other legal activities to assist in making ultra-high-speed Internet service accessible and affordable to all residents and businesses in the entityâ€™s territory. To the fullest extent authorized by law, the Initiative will operate as a public utility and will be governed by the participating parties of the interlocal governmental cooperation agreement. The Gulf Coast Broadband Initiative is intended ultimately to include and serve all of Mississippiâ€™s coastal cities and counties who choose to join the Initiative (10 cities and two counties have joined thus far) and to benefit all those living or doing business in this region. In addition to its numerous other benefits, improving access to ultra-high-speed Internet service will support improved management of public lands and water bodies, as well as improve regulatory compliance monitoring in the participating cities and counties. Through the use of Internet sensors in drones, satellites and other devices, access to the new ultra-high-speed Internet service will	Harrison	Yes	Yes	Yes	85	Yes	Yes	Yes	Yes	Yes	agricultur	$ 15,000,000.00	$ -	

	Workforce Development	5423	10/23/2015	Mississipi Oysters Aquaculture Revolving Loan Program	Title: Mississippi Oyster Aquaculture Revolving Loan Program Eligibility of Activity: This activity complies with the following two eligible activities: â€¢ Mitigation of damage to fish, wildlife and natural resources â€¢ Workforce development and job creation Introduction: Oysters support a robust commercial fishery, improve water quality, and provide habitat for a number of economically and ecologically important fish species. As a result of the Deepwater Horizon oil spill and related anthropogenic activities (such as river releases) the estimated number of oysters that were lost (direct death and subsequent reproductive loss) at a minimum, was four billion oysters Gulf wide over three generations of oysters (seven years). Through an extensive planning effort in Mississippi in 2015, the Governorâ€™s Oyster Council created goals of increasing oyster harvests and creating new job and business opportunities. The establishment of a finance program could facilitate positive change for the oyster industry and the resource. Such finance programs have been instituted in other parts of the country where a revolving loan program is initiated that required little to no collateral, requires owner equity (i.e., investment of 10%), and allows loans to be used for the purchase of oyster shell and aquaculture specific equipment. These loan programs help initiate a boost to the industry in a particular sector (i.e., aquaculture) and provide opportunities for previously disadvantaged communities to engage, diversity income streams, and enhance economic development. Oyster aquaculture business startup expenses can run from $5,000 to more than $100,000 depending on the scope of the enterprise. Obtaining a loan from traditional commercial lenders for aquaculture business projects can be challenging for small enterprises and individuals considering the two to three-year growing period between oyster planting and growth to market size, as well as the lack of available business equity and collateral security. Mississippiâ€™s aquaculture loan program will require all principal payments return to a revolving fund to support future rounds of funding. The MDMR will partner with a credible lending institution to evaluate the credit worthiness of the prospective borrower(s), as well as the viability of the proposed project production and business plan (including the financial projections) that are required to be submitted with the application for assistance. Location: Mississippi Gulf Coast Purpose: The Mississippi Oyster Revolving Loan Program would provide affordable financing to oystermen and other parties who want to start or expand commercial oyster aquaculture operations in Mississippi.	St Tammany	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 1,000,000.00	$ -	
	Workforce Development	5452	12/8/2015	TechTown Pascagoula	TechTown is a â€œtechnology and entrepreneurial learning center offering year-round after-school programs and summer camps.â€ TechTown provides skill-building and certification curriculum for five focus areas including robotics, programming, film and arts. In contrast to the original TechTown Chattanooga, the proposed TechTown Pascagoula would be a 5,000 sq ft extension center offering focus areas customized for the jobs in our community. TechTown has a strong emphasis on securing scholarships for underprivileged youth. In addition to youth programs, TechTown also offers technology focused programs for adults and seniors. A TechTown Pascagoula program would combat the documented recruitment needs of local industries who are spending countless hours travelling to recruit necessary workforce. TechTown Pascagoula would spark the interest of local youth region-wide in STEAM (Science, Technology, Engineering, Arts, and Mathematics) related jobs of which Pascagoula is fortunate to be plentiful in. A facility of this magnitude would be the first in the State and have a multi-county and multi-state draw. Headquartered in Pascagoula, it would serve as a great partnership with Ingalls, Chevron, Singing River Health Systems, the Pascagoula-Gautier School District, the City of Pascagoula, the Mississippi Gulf Coast Community College (MGCCC), and MGCCCâ€™s recent collaboration with Mississippi State University among unforeseeable others. Attachments include presentations explaining TechTown and the capabilities.	Jackson	Yes	No	Yes	50	Yes	Yes	No	Yes	Yes		$ 2,000,000.00	$ -	
	Workforce Development	5453	12/11/2015	GoCoast Trust Fund	The proposed project will fund a perpetual GoCoast Trust Fund that will provide: (1) debt and equity financing of qualified private and public projects that will repay loans with interest and yield a return on equity investments; and (2) grants to public agencies for urgent public projects that do not generate revenue directly, especially eco-restoration projects. The Trust Fund will provide a long-term, economically-sound framework to stimulate regional economic recovery and growth that serves long-term public interests, and it will have the flexibility to adjust to market-driven changes in the regional, national and world economies. The GoCoast Trust Fund will be governed by a three-member Board of Trustees, composed of one resident from each of Hancock, Harrison and Jackson counties. The Governor shall appoint the trustees, subject to the approval of the Mississippi Senate and House of Representatives, for four-year terms, coterminous with the Governor. All actions of the Board of Trustees must be by unanimous vote of the Trustees. Operating expenses of the Trust may be funded from Trust Fund income and any public or private grants obtained by the Trust. On or before September 1st of each year, the Trustees shall submit to the Governor, the Legislature, and MDEQ (1) a â€œPlan of Investmentsâ€ for the next state fiscal year itemizing all proposed investments and projects for the next fiscal year, (2) financial statements of the Trust for the previous year, and (3) financial statements projected for the next five years. Prior to submitting each Plan of Investments, the Board of Trustees must submit the Plan to all state Senators and state Representatives representing any part of the three Coast counties. If a majority of Senators and Representatives submit an objection (in writing) to any specific project in the Plan, then that project shall be deleted from the list of projects that may be funded by the Trust in that fiscal year. The Trust will operate in the nature of a public investment bank to fund projects that address economic development; infrastructure; eco-restoration; research and education; seafood; tourism; or workforce development. Priority will be given to projects that stimulate and accelerate long-term, regional economic recovery and growth; job production; tax-base expansion; and quality of life for Mississippi Gulf Coast residents. Selection must be based on projects that, â€œbut forâ€ GoCoast Trust assistance, otherwise would likely not go forward within a strategic timeline and scope of development according to the long-term strategic plan adopted by the Board of Trustees. The operating office of the Trust shall be located within the three Coast counties. Preference will be given to projects that leverage financing from private sources and other public sources, including state and federal grants and incentive programs, such as New Market Tax Credits, Tax Increment Financing, Mississippi Tourism Rebate Program, Public Improvement Districts, Business Improvement Districts, and Community Development Financial Institutions, like the Gulf Coast Renaissance Corporation. Each project will demonstrate it has an economically sound basis for repaying the investment and, where feasible, yielding an appropriate return on investment. Although lending and investment criteria will be designed to perpetuate and grow the Trust Fund, the Board of Trustees will have the flexibility to set terms that may be less than market rate in order to incent timely, qualified projects that make long-term, systemic improvements to the regional economy and quality of life.	Hancock, Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 100,000,000.00	$ -	
	Workforce Development	5458	12/23/2015	City Hall	Develop a site and construct a new City Hall to consolidate City operations. Pascagoula is one of the only cities on the coast that has not built a new or renovated facility on the coast. Operations are scattered among several locations, and buildings are deteriorated, costing considerable funds in annual maintenance and inefficient operation. In addition, residents must visit several locations to complete business with the City, making it not user-friendly. A new facility would consolidate services, making it more efficient for staff and citizens. The project would include site selection, development, design and construction.	Jackson	Yes	No	Yes	90	Yes	No	No	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5459	12/23/2015	Welcome Center / Tourism Center	Develop a site and construct a welcome/tourism center for the City of Pascagoula. The City has much to offer, and several large employers bringing visitors to the area. Often, these visitors miss the jewels of Pascagoula and Jackson County in favor of larger facilities in other nearby cities. A welcome / tourism center would provide meeting space, information about local attractions and facilities, and would complement other similar ventures on the Coast.	Jackson	Yes	No	Yes	90	Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -	
	Workforce Development	5460	12/24/2015	National Diabetes and Obesity Research Institute	On December 24, 2015, the National Diabetes and Obesity Research Center and Tradition-Medical City submitted Project #5460 to the RESTORE Project Portal. The information below is an update to Project #5460 based on a recent study and updated design and building estimates. The National Diabetes and Obesity Research Institute (NDORI), a Mississippi (MS) non-profit 501 (c)(3) corporation, is an innovative, translational research institute focused on the population-based study and treatment of diabetes and obesity, currently in its infancy. The singular focus of NDORI is to find a cure for diabetes - a disease that impacts more than 15% of MS's population. NDORI is located at Tradition, a 4,800-acre master-planned community in Harrison County at the intersection of Highway 67 and Highway 605 north of Biloxi and Gulfport. NDORI represents a unique opportunity to invest in the long-term health of the state, position the MS Gulf Coast as a regional leader in the growing health and life-sciences industry, create a catalyst for exponential economic growth, and promote community stability through development and investment. The concept would be one of the cornerstones of a healthcare, bioscience cluster: the Tradition Medical City. In spring 2018, Southern MS Planning and Development District (SMPDD) commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern MS to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; the final product of this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippi." Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development, and a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for future growth of NDORI and Tradition based on the success of other existing healthcare clusters at Lake Nona, FL, and the Research Triangle Park in NC. Based on these findings, NDORI and Tradition will make the MS Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the state and region. NDORI is strategically located in MS and serves as a natural laboratory positioned to address the effects of diabetes and obesity at the epicenter of incidence. The result of the investment in diminishing health disparities will have far-reaching impact in reducing health-related costs of Mississippians and the associated healthcare costs encumbered by the state. Consider the following statistics, in 2016 over 371,622 Mississippians had diabetes (over 15.4% of the state population). MSâ€™s diabetes rate nearly doubled that of the global rate and was significantly higher than the 10.5% national rate. It has been predicted that by 2035 the global population with diabetes will increase to 600 million. With nearly 1 in 6 Mississippians affected by diabetes, the cost to the state at $3.5 billion annually is enormous. The result is weak worker productivity, high poverty rates and low labor participation. NDORI and the additional medical development in the Tradition Medical City will serve to create the potential for significant economic savings to the state. NDORI will serve as a catalyst for economic growth, community stability and community resilience by providing or supporting a diverse offering of educational opportunity for residents of the state as hospitals, universities, research institutions and health and life science companies are engaged or locate in the development. This type of development will serve to strengthen the state and Gulf Coast's economic health through creation of high-value jobs, creation of middle-skills jobs to promote growth of the middle-class, creation of educational opportunities that result in highly-skilled	George, Harrison,	Yes	No	Yes	81	Yes	Yes	No	Yes	Yes		$ 57,000,000.00	$ -	
	Workforce Development	5464	1/25/2016	Highway Connectivity Project for City of Moss Point	A project to provide ease of transportation, accessibility and safety along the Interstate 10, Highway 63 and Highway 613 corridors from Old Saracennia Road north of 1-10 to McInnis Avenue and Grierson Street south of I-10. 1. Interchange improvements and extension of service roads along with service road improvements along the I-10 and Hwy. 63 and 613 corridors. 2. Transform the Pascagoula Street/River Road/Griffin Street/Dantzler Street corridor into a major improved connector between Hwy-90 and Hwy-613, with widening, turning lanes, improved drainage, resurfacing, lighting, etc. 3. Widening and improvements along Grierson & McInnis Ave. from Hwy-63 to Main St. (Once Hwy. 90) to create greater access and increased flow to downtown from the east. Also include a stop light and cross walk at McInnis & Main and straightening and widening of McInnis in front of City Hall with added parallel parking. 4. Turning lanes and a traffic light at Hwy-613 and Dutch Bayou Road to create a new main entrance and exit at the Pelican Landing Conference Center, at the intersection. 5. Extend Audubon Way eastward across Main Street to Morris, creating a new intersection and creating commercial development opportunities.	Jackson	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ -	$ -	
	Workforce Development	5465	2/16/2016	Computerized RESTORE	Developing Working Proposals to hire University Researchers and Marketers to address the RESTORE act and present the proposal 100% into dimensional sections for fundamental learners comprehensive training and developmental studies in progress. Each University Researcher that provide a biographical sketch, resume, CV etc. will be assessed to his or hers RESTORE ACT decision making teams. There will be implementation of US Military and International interventions and redesign ROTC Workforce Innovation Training and Development.		Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 18,000,000.00	$ -	

	Workforce Development	5480	4/29/2016	Oyster Restoration through Aquaculture - Aqua Green	In Mississippi and throughout the Gulf of Mexico, the oyster fishery serves as an integral part of the economy and heritage of coastal communities. Events over the past decade such as Hurricane Katrina and numerous anthropogenic events (e.g., spillway openings, oil spill, etc.) have, however, impacted those resources in Mississippi and caused significant reductions in oyster landings and the amount of viable oyster reef habitat present. Identified as a priority by the Governorâ€™s Oyster Council (Council), USM proposes to continue its research and development in the production of eastern oyster larvae in an artificial seawater, recirculating aquaculture system to incrementally scale up larval production to provide a consistent supply of healthy oyster larvae for purposes of restoration and economic development. This supply of larvae will directly support: (a) restoration of the Stateâ€™s public reefs and expansion of private leases to increase annual oyster harvest numbers; (b) creation of living shorelines and reestablishment of natural non-harvest reefs for shoreline stabilization/marsh restoration, fishing habitat, and water quality enhancement; and (c) off-bottom culture (â€œoyster farmingâ€for expansion of the Stateâ€™s commercial oyster fishery. To support these restoration objectives and achieve the Stateâ€™s goal of ten billion eyed oyster larvae annually, acquisition of the Aqua Green aquaculture facility in Perkinston, MS, and retrofitting/expansion of systems there is necessary to provide a platform for this large-scale larval production. Aqua Green was identified by the Councilâ€™s Hatchery Sub-Committee as the recommended hatchery to support Mississippiâ€™s oyster restoration because of its inland location out of harmâ€™s way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	77	Yes	Yes	Yes	Yes	Yes		$ 13,000,000.00	$ -	
	Workforce Development	5482	5/4/2016	USM Ocean Enterprise at the Mississippi Aquarium	Background The maritime â€˜Blue Economyâ€™ is the largest sector of Mississippi economic activity and includes shipbuilding, shipping (and related), fishing, tourism, defense (and related), and construction activities among many others. New and very large investments are being made to capitalize on this growth potential. We propose to centralize the connections between this massively important state investment with the investments the University has made in marine and fisheries research; business and entrepreneurship; construction; and trade, transportation and logistics. Need Given the magnitude of the investments made by both the state and the University, there is not a centrally located access node to intersect needs of economic development with the intellectual capacity of the University. The nation is full of examples where critical mass has been reached by providing facilities at the nexus of industry, academia and agencies; clearly, these intersections create new and exciting opportunities and push the boundary of innovation. The State of Mississippi needs such a place, and we propose a state-of-the-art facility called The University of Southern Mississippi Ocean Enterprise to be located adjacent to the Mississippi Aquarium in the heart of Mississippiâ€™s Blue Economic Development of Gulfport. Opportunity Through Ocean Enterprise, USM will develop and concentrate expertise in the areas of marine research, economic development, entrepreneurship, trade, logistics and transportation. We will place world leaders in research and education in the facility, and give them access to state and federal partners and to leaders in economic development and private industry. In the facility will be research and education spaces for training tomorrowâ€™s leaders, collaborative spaces to solve the regions most critical problems and community spaces to bring all of the citizenry to the table.	Harrison	Yes	Yes	Yes	2.8E+07	Yes	Yes	No	Yes	Yes		$ 28,000,000.00	$ -	
	Workforce Development	5485	6/1/2016	Restore the Coastal Tree Canopy Strategies & Storm Preparedness and Mitigation	Restore the Tree Canopy will work with every city and county in the three coastal counties to identify perpetual public green spaces and enhance those spaces with trees varieties that are sustainable. This project can also work with previously approved RESTORE project to ensure that urban forestry is included in site development. The sites that we work with will be identified by either they city or approved restore project locations such as the conservation green ways or other projects approved. This project will help make-up for or mitigate the natural resources of trees that support habitats of all kinds including native birds, reptiles, and other species. Plus matched and enhance economic benefits. The project will include benefits for people and wildlife. The results will be a series of arborvitae creating a linear coastal green spaces for benefits such as eco-tourism recreation, clean air and water, storm water management, shade, increase property value and many other related benefits. Restore the Tree Canopy Strategies Habitat, Water Quality, Community Resilience Submitted by Donna Yowell, Executive Director of the Mississippi Urban Forest Council 601-672-0755 â€œRestore the Canopy Strategiesâ€ is a project that meets all five of the overarching framework goals of Restore the Gulf. This project will focus on collaborative and sustainable tree planting strategies and activities for local government, citizens, and NGOâ€™s. The project will include ways the community and individuals can actively participate, building knowledge, resilience, conservation activities, and ownership. Communities will learn the benefit of connectedness, to a healthy Gulf, based on actions within their own community. Stakeholder engagement and wide spread collaboration would be another focus. Trees have proven their natural capital to tourism and community economic enhancement, as well. Restore the Canopy is comprehensive in being a Mississippi coast wide project and will cover all three coastal counties with a recommendation to include the other 3 counties in the lower tier of Mississippi. The project will include all cities and counties officials plus local civic groups such as chambers, youth groups, and all other civic groups. This would be a landscape level restoration effort along coastal streams, targeted shore lines, and watersheds; implementing a strong green component and collaboration for involvement. *Initiate community based efforts to increase the awareness of the importance of coastal resources and the best management practices to support conservation and renewal of the valuable assets. *Restore water quality *Restore ecosystems.	George,Harrison,J	Yes	Yes	Yes	80	Yes	Yes	No	Yes	Yes		$ 450,000.00	$ -	
	Workforce Development	5494	7/6/2016	SRHS Infrastructure	Portions of the environmental infrastructure of our two hospitals are in excess of 40 years old and are failing. Other environmental utilities such as water utilization, electrical switch gear, and lighting for both acute care hospitals as well as our clinics are using technology that is costing hundreds of thousands of dollars a year more than their modern, energy and resource efficient counterparts. SRHS is proposing to replace failing components such as the SRH cooling tower and electrical switch gear, as well as the inefficient lighting, components of the OSH chiller, OSH boiler plant, and several air handler units at OSH, with modern counterparts that will save SRHS approximately $400,000 a year in operating expense. The cost of the project is estimated at $7,800,000.00, with an ROI of less than 20 years and a projected life in excess of 30, producing a net return on investment in excess of the cost of the project. SRHS is seeking capital funds for this project.	Jackson	Yes	Yes	Yes	100	Yes	Yes	No	No	Yes	healthcare	$ 7,800,000.00	$ -	
	Workforce Development	5503	7/18/2016	Center of Hope	The Center of Hope "A Place Called Home" will be a facility serving homeless families and single men and women (some of them veterans) on the Coast of Mississippi in Gulfport. The Center will be a 28,500 sq ft facility, providing 120 beds, multipurpose room and kitchen, administrative offices, meeting rooms, child play/study areas and a chapel. This is a transitional housing center that will provide homeless residents a safe, secure location to get back on their feet. We will evaluate them on a case by case basis to determine their overall needs. We are partnering with several different groups and organizations to give them the tools needed so they can be productive members of society.		Yes	No	Yes		No	Yes	No	No	Yes		$ 5,700,000.00	$ 4,500,000.00	
	Workforce Development	5505	8/11/2016	Gulf Coast Institute for Minority Leadership in Natural Resources	The Deepwater Horizon Oil Spill caused lasting ecological and socio-economic impacts in Gulf of Mexico (GM) and adjacent land resources. Efforts have been initiated to restore impacted ecosystems. Such restoration efforts will be long-term and itâ€™s imperative that a well-trained cadre of biologists with leadership skills exists to ensure that such restoration efforts continue, are consistent, ensure multiagency cooperation, and fulfill long-term goals. Itâ€™s imperative that demographics of these leaders are consistent with coastal constituencies. However, demographics of individuals in leadership roles in natural resources donâ€™t reflect the citizenry of Gulf Coastal States, nor even the U.S. The population of counties bordering GM was 12,523,710 individuals, representing 20.1% of population of the 5 Coastal States. Of these >12 million citizens, 42.6% are minorities, with 17.4% Black, 0.6% Native Peoples, 2.7% Asian, and 20% Hispanic/Latino. Natural resources in coastal counties adjacent to GM are critically important socio-economically and ecologically. Many state and federal agencies are charged with conserving these resources and itâ€™s imperative that those with leadership roles of these agencies reflect the citizenry who need these resources. Itâ€™s not sufficient to simply recruit minority leaders from universities. Their unique skills must be identified and nurtured during their B.S. education. There also exists many young professionals employed by federal and state agencies, who are candidates for leadership roles, and would benefit greatly from advanced training in leadership. Most of these professionals likely graduated from a traditional natural resources B.S. program. These programs emphasize organisms and habitats, and do not allow those select individuals to express and build on inherent leadership skills. Itâ€™s regrettable that most B.S. programs in natural resources in the U.S. emphasize animal and habitat management principles, with less focus on developing leadership skills. However, there is always a subset of individuals who display skills in leadership such as being presidents of professional organizations. The organismal and habitat emphases of university curricula often do not allow these â€œfuture leadersâ€to develop and build their inherent leadership skills. Individuals displaying these unique skills must be identified and â€œnurturedâ€. Mission Statement: Identify and train a subset of highly motivated professionals within natural resource management agencies and undergraduate students representing the 4 key minority groups within the Gulf Coastal States to understand federal and state government operations, federal and state policy development, administration, media interaction, advanced public speaking, conflict resolution, professional conduct emphasizing ethics, and financial accounting. Program Structure: The Mississippi State University Extension Service will be the coordinator of the program and will house the Institute. The Institute will have 2 units: Adult Professional Training and Undergraduate Training. The Adult Professional Training unit will instruct young minority professionals employed in state and federal agencies to expand their leadership skills. The second unit will entail establishing agreements with each land grant university within the Gulf Coast region to identify and train those minority students displaying leadership. Identifying employed minority professionals will first involve, annually, contacting current administrators of all natural resources management federal and state within the Gulf Coast, and soliciting names of individuals they feel display innate leadership and would benefit from advanced training in leadership and knowledge of how government operates via an internship in Washington, DC. The second unit will address training future leaders via undergraduate students. The key to successful recruitment of minority students into natural resources administration includes 4 cornerstones:		Yes	No	No		No	Yes	No	No	No		$ 15,662,208.00	$ -	
	Workforce Development	5507	8/16/2016	Mississippi Gulf Coast Region Utility Board Restore Plan	In the attached plan you will find recommended turnkey projects for five South Mississippi counties: Hancock, Harrison, Jackson, Pearl River and Stone. These are projects that can have significant environmental impacts on the region. Each individual project identified can be accomplished within a budgetary range of $500,000 to $3 million. Any approved project will enhance waterways and in many cases directly enhance the quality of oyster habitats throughout the region. The Mississippi Gulf Coast Region Utility Board adopted a strategy to work together as a region, understanding what is good for one, is good for all. The objective of the attached plan is not to seek approval of every submitted project, but rather approval of one project at a time if necessary. Over a 15 year period one can only imagine the accumulative effect, the significant environmental impact this strategy holds for South Mississippi.		Yes	Yes	Yes	50	Yes	No	Yes	No	Yes		$ 500,000.00	$ -	
	Workforce Development	5508	8/17/2016	Keegan Bayou Waste Water Treatment Plant Improvements for the Collection and Treatment of Seafood Industry Discharge	As part of the comprehensive public and private effort to improve water quality in the Back Bay of Biloxi before it reaches the Gulf of Mexico, the City of Biloxi is requesting RESTORE funding to reroute seafood processing byproduct discharge and treat it at the Keegan Bayou Waste Water Treatment Plant. This project will result in benefits to the public by preserving existing levels of business and supporting expansion of the local seafood industry operating on the Back Bay while significantly enhancing water quality through more efficient collection and treatment of industrial discharge. The proposed discharge collection and treatment improvements will provide a well-coordinated system to more expeditiously improve Back Bay water quality by exceeding National Pollutant Discharge Elimination System permit requirements for existing processors while allowing the cost-effective growth of Biloxiâ€™s seafood industry. This project complements the City of Biloxiâ€™s RESTORE Project #5399, Back Bay of Biloxi Festival Marketplace and Marinas, which requests funding to revitalize the seafood industry through public improvements that include expanded commercial dock space and supportive landside amenities. Project #5399 also includes incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program in partnership with the Mississippi Department of Marine Resources. The two projects will be coordinated to enhance traditional working waterfront activities on the Back Bay with a variety of land uses that showcase Biloxiâ€™s rich cultural history as the former â€œSeafood Capital of the Worldâ€through shopping, dining, entertainment, and educational venues. These authentic, family-oriented activities will help grow the regional tourism industry in concert with activities to revitalize the seafood industry. The two RESTORE projects also will work together to meet federal and state water-related public health goals of the Clean Water Act to support present and future most beneficial uses for the propagation and growth of aquatic life as well as public water supply and public recreational uses. Implementation of both projects will have significant near-term as well as long-term positive impact upon Back Bay water quality, wetlands conservation and recreational safety and appeal. In collaboration with the Harrison County Utility Authority and the Mississippi Department of Environmental Quality, the City of Biloxi will design the discharge collection and treatment project to address projected levels of increased discharge from anticipated seafood industry expansion. Best management practices will be used throughout project implementation and operation.	Harrison	Yes	Yes	Yes	100	Yes	Yes	Yes	Yes	Yes		$ 25,000,000.00	$ -	

	Workforce Development	5518	10/17/2016	Elevating the profile of the Mississippi shrimp industry: a post-oil spill Fishery Improvement Project to advance and promote the sustainability of the Mississippi shrimp fishery.	Sustainability projects are the status quo in the seafood industry. The supply chain is being pressured to provide assurances that the product is sustainably harvested. Policies at companies such as Wal Mart, Sysco, and Whole Foods are very specific and may block product that cannot demonstrate compliance. Despite being harvested under robust U.S. fishery management, most retailers require third-party verification through certifications or fishery improvement projects (FIPs). This proposal seeks to continue developing a FIP for the Mississippi (MS) shrimp fishery to elevate the fisheryâ€™s profile following a tarnished reputation from the Deepwater Horizon Oil Spill. The project has four tiers: 1.Assessment â€“ Sustainability pre-assessments to internationally accepted standards are the basis for FIPs. Some retailers specifically require a Marine Stewardship Council (MSC) assessment. This project will fund an MSC pre-assessment and the transition to a â€˜Comprehensive FIPâ€™ (see Conservation Alliance for Seafood Solutions). G.U.L.F. has recruited stakeholders for a FIP Committee to develop a time bound Work Plan verified by a third-party certifier. Over three years, G.U.L.F. will facilitate meetings of the Committee to track progress of the Plan. 2.Gear inspection â€“ Industry education about turtle excluder devices (TEDs) and bycatch reduction devices (BRDs) is an existing action of the FIP. A major concern in the Gulf of Mexico shrimp fisheries is interaction with endangered sea turtles. In federal waters, vessels are required to carry TEDs and BRDs, and non-compliance with regulations can cause a fishery closure if it passes a set threshold. The project will fund a Gear Inspector to conduct courtesy checks, ensuring TEDs and BRDs are properly installed, reducing the rate of sea turtle capture and the likelihood that fishermen carry non-compliant gear. 3.Industry Outreach: Inshore fleet â€“ Skimmer trawls are currently exempt from federal TED requirements if they adhere to tow time limits (50 CFR 223.206(d)(3)). NOAA is drafting an Environmental Impact Statement for potentially eliminating the TED exemption rule. G.U.L.F. will monitor this rule change, regularly update the MS shrimp industry, and educate industry members on how to submit comments through the rulemaking process. BRDs are not required in state waters. G.U.L.F. will continue to educate harvesters on benefits of BRDs and encourage voluntary use to further minimize bycatch. 4.Consumer Outreach â€“ To communicate the progress of the MS shrimp industry and its devotion to sustainability, G.U.L.F. will attend conferences and education events in MS and across the country, distribute materials encouraging consumers to purchase MS shrimp, and recruit restaurants to join the Restaurant Partnership Program, which encourages them to source domestic seafood and empowers wait staff as ambassadors for the industry.	Harrison,Jackson,J	Yes	No	No		Yes	Yes	Yes	No	No		$ 391,073.00	$ -	
	Workforce Development	5525	1/1/2018	Nature Tourism Proposal for the Mississippi Gulf Coast Region: A project and budget plan based on the 2016 process and strategy document,	Tourism and business leaders have realized the necessity of creating an environment of conservation and protection of Mississippiâ€™s coastal resources in the wake of the Deepwater Horizon Oil Spill in the Gulf of Mexico. A great deal of planning has taken place since 2010 to celebrate the natural beauty and wonder of the Mississippi Gulf Coast. There is an area of opportunity in this region that is a most promising method to protect natural resources and promote environmental stewardship while stimulating new economic development. Across the world, nature tourism is recognized as a significant effort to provide responsible travel to natural areas and promote conservation. Nature tourists are looking for original and authentic experiences to high-quality environments with historical and cultural significance. These travelers are more likely to be well educated and travel often in multi-generational groups with extended families. They are seeking safe, well-connected communities that place emphasis on environmentally and culturally responsible travel with low visitor impact to natural areas. The Final GoCoast 2020 Report, commissioned by the Executive Order of Governor Phil Bryant, included focus of â€œEco-Tourismâ€ to be a substantial initiative for recovery, restoration, tourism, and economic development. In response to the worthwhile efforts of the GoCoast 2020 Final Report, a Nature Tourism Task Force was created and adopted the â€œFramework for Nature Tourismâ€ on November 1, 2013. In its conclusion, the Task Force recommended the Mississippi Gulf Coast National Heritage Area (MGCNHA) to lead a nature-based tourism initiative. In 2015, with funding from the National Parks Service, the MGCNHA reinvigorated this Nature-based Tourism Task Force of nineteen (19) Gulf Coast leaders, with assistance from the contracted team of Allen Engineering and Science, Gulf Regional Planning Commission, and the Heritage Trails Partnership. This year-long consultation culminated in the recommendations depicted in the 2016 NBT Plan for Coastal Mississippi (NBT Plan). Accepting the charge to implement a nature-based tourism plan, this Mississippi Gulf Coast National Heritage Area - Nature Tourism Proposal for the Mississippi Gulf Coast Region outlines the framework to manage, operate, plan, market, and implement the recommendations with a budget of $10 million over the next five years. This proposal outlines management and administration, operations, planning, marketing, and implementation. Management and Administration: The MGCNHA will provide general management, oversight, and coordination of day to day operations for the nature-based tourism program. It will provide leadership to local officials and partners to implement the NBT Plan. Six (6) Area Managers will be chosen by each of the six coast counties to serve as liaisons to ensure that initiatives and priorities for each of the counties are being carried out with consistency, and that established goals are being met. Operations: The MGCNHA will implement the recommendations outlined in the NBT Plan, as they are aligned with the mission of the MGCNHA to conserve, enhance, and promote understanding of the heritage resources in the six counties of the MS Gulf Coast. Office and travel related expenses are included in the proposal. Planning: Years of collaboration between a diverse group of stakeholders, including tourism professionals, small business owners, natural resource experts, Chambers of Commerce, and NGOâ€™s in Mississippi culminated in the 2016 Nature-Based Tourism Plan for Coastal Mississippi developed for the six coastal counties. A successful program will benefit the ecological and economic health of South Mississippi, as well as provide a framework for development in the Mississippi Hills and Mississippi Delta National Heritage Areas.	George,Harrison,P	Yes	Yes	Yes	10	Yes	Yes	No	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5526	12/10/2016	Magnolia Bayou Acquisition and preservation/research center	Magnolia bayou is an approximately 87 acre bayou and stream that feeds into the Bay Saint Louis bay. It sits just behind the Froogels and to the east of Dunbar street off of Highway 90. It is relatively undisturbed, with homes surrounding the boundaries of the bayou. Hancock County does not have much in the way of environmental education centers, and this would be the perfect location for it. There is a cleared tract of land that sits just off the service road that could serve as the parking lot and educational building location. The educational center will offer classes on the natural environment in Hancock county, tours of the bayou, educational outreach to local schools and groups, etc. This will help bring eco-tourism to Hancock County, start a grassroots educational program with the local youth to teach them how to be environmentally conscious from a young age, and to preserve a very important piece of Hancock County for years to come. This project is flexible, but the important part is protecting this land from any future developments and to utilize it to educate our youth. If there are any questions about this proposal please don"t hesitate to contact me! Thank you so much for indulging me in this proposal.	Hancock	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ -	$ -	Land Acquisition
	Workforce Development	5537	6/1/2017	Water Filtration, Clarity and Treatment Project	The City of Gautier geographically is located along the west edge of the Pascagoula River Basin as it empties into the Mississippi Sound. The aquifers that the City utilizes for its water supply are highly enriched with iron, manganese and organics due to its geographic location. These natural elements contained within the water supply generate a brownish tinted water, which is aesthetically unpleasing and is an impediment to economic development. Although the Cityâ€™s potable water meets all of the required public health parameters and is deemed safe for consumption, the negative image greatly impacts the City in its ability to attract residents and economic development such as restaurants, hotels and tourists. After many years of research and a commitment from the Mayor and City Council, the City adopted a Clear Water Filtration Plan by utilizing new technology, an Ion Exchange Filtration System, to treat their water supply for improving water clarity. The Filtration Plan separated the City into three regions, and each region would require the installation of an Ion Exchange Filtration Station to treat the Cityâ€™s daily generated water supply of 1.6 million gallons. The City completed its first site in 2015. It is located at 3305 Gautier Vancleave Road and treats approximately 1 million gallons per day, which equals approximately 63% of the Cityâ€™s daily water usage . Although a significant portion of the Cityâ€™s water supply is being treated, water wells in the other regions are still producing the discolored water into the Cityâ€™s water distribution system. Therefore, residents and businesses in those areas still receive varying levels of discolored water. The scope of work for this project is to secure the necessary property within the remaining two regions and construct two additional Ion Exchange Filtration Systems to ensure all of the Cityâ€™s water supply is properly treated and clear in order to promote and enhance economic development of the City. The locations of the two systems should be placed in close proximity of the regionâ€™s water supply wells and water storage facilities to minimize the necessary pipeline cost to capture the discolored water for treatment prior to entering the water distribution lines. This project will improve the livability of the community, enhance sustainability and promote long-term growth. The benefits associated with this project are the overall public confidence in the Cityâ€™s water system, removal of the negative image of the discoloration of the water which will enhance the Cityâ€™s ability to expand residential and commercial growth, along with improving tourism opportunities throughout the City.	Jackson	Yes	No	Yes	95	Yes	No	No	Yes	Yes		$ 6,000,000.00	$ -	Land Acquisition
	Workforce Development	5538	6/1/2017	COMMERCE AND TECHNOLOGY CORRIDOR	With more than six miles of interstate frontage, the City of Gautier has access to only two interstate interchanges: One at I-10/Miss. 57 and one at I-10/Gautier-Vancleave Road. The City has experienced development pressure at the I-10/Highway 57 interchange, as evidenced by the following: 1) The planned widening of Highway 57 by MDOT 2) The construction of the Bienville Orthopaedics medical campus on East Lake Blvd./Allen Road and 3) Significant expansions of B&D Plastics, a manufacturing facility and 4) Sunplex Industrial Park access from this interchange. The City has recently taken out a $1 million CAP loan from the Mississippi Development Authority and expanded and upgraded a portion of Allen Road and renamed it East Lake Boulevard to accommodate the immediate development occurring in the area. The City has also received a commitment letter for $350,00 in DIP funding and $750,000 in a second CAP loan from MDA to construct a 300,000- to 400,000-gallon water tank. This water capacity expansion addresses the immediate needs of this area, but future planned expansions at Bienville Orthopaedics and other new developments will require additional water storage capacity. There is need for an additional 500,000-gallon water tank in this area. Currently, the City is utilizing 98 percent of its water capacity, so these upgrades are desperately needed. Also needed in this area are additional upgrades and widening of Allen Road/East Lake Boulevard and Dobson Road and improved geometrics with signalization at the access point from Highway 57. The City has had many inquiries regarding development within the area, which will complement and support the development that has already occurred. There are plans for a hotel, pharmacy, medical supply stores and restaurants to support the existing medical facility. The area where this development pressure is occurring was previously a rural area, annexed by the City of Gautier. As a result, the existing roadways are small roads that are hardly wide enough for two cars to pass each other, and they need to be expanded to accommodate the development. This area provides the opportunity for interstate frontage development, and the City has adopted a master plan for the smart growth of this area, which requires the installation of a water tank that the City is currently undertaking, and utilities in order to provide adequate levels of service for the anticipated growth of this commerce and technology corridor. The master plan includes new streets, expanding existing streets, drainage, lighting, a multi-use pathway, recreational amenities around the existing lake and other related improvements. Specifically, the project includes the following infrastructure improvements to accommodate development pressure and stimulate the additional economic growth that will result from the recent construction of the medical campus, which provides doctor visits, imaging services, outpatient surgery and physical therapy. A 1,000-gallon-per-minute water well, along with utility line extensions in the Highway 57 development corridor and relocation of lines and upsizing the lift station, and water quality treatment to include an additional filtration system. In order to accommodate the economic growth, the necessary infrastructure is an indispensable piece. Secondly, the project includes further improvements to Allen Road, Robinson Still Road and Dobson Road to include right-of-way acquisition, permitting, construction, drainage and lighting. This project will improve the livability of the community, enhance sustainability and promote long-term economic growth. The benefits associated with this project are long term economic growth, workforce development and job creation, infrastructure benefiting the economic resources of the area, and enhancement of public health and safety for the citizens.	Jackson	Yes	No	Yes	90	Yes	No	No	Yes	Yes		$ 11,000,000.00	$ -	
	Workforce Development	5539	6/1/2017	Southeast Gautier Sewer and Storm Sewer Infrastructure Upgrade	The southeast portion of the City of Gautier has experienced repetitive flooding and sewer back up. To address this ongoing problem, the City is proposing to upgrade its sewer and storm sewer systems. The overall improvement plan is to upsize the gravity sewer lines, slip line all manholes/laterals and upgrade all existing sewer pump stations serving this area. The City also is proposing to replace deteriorated and undersized drainage pipe, clear and construct profiled channel ditches to expand the capacity of the drainage flow and to construct a sediment retention basin north of U.S. 90 to retain a percentage of water from entering the drainage system through this area during rain events. The benefits of this project is improving the quality of life for the residents who experienced repetitive flood loss over the years. Eliminating the sewer back up into the storm sewer system, increasing the capacity of storm water run-off where acceptable and to retain storm water at strategic locations will improve the water quality of the Cityâ€™s bayous and the Mississippi Sound.	Jackson	Yes	No	Yes	95	Yes	No	Yes	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5540	6/1/2017	Tourism Marketing Strategies	This projectâ€™s scope would be to develop a tourism marketing strategy that would include the creation of an interactive website and attractive brochure/other marketing materials for placement at key locations to highlight the Cityâ€™s unique tourist attractions, lodging opportunities, retail areas, restaurants and other amenities. This informational packet would include a map showing directions to each location. It is anticipated that kiosks could be strategically placed that would aid tourists in finding their desired destinations and to inform of other points of interest. The City does not have a chamber of commerce to help with such items.	Jackson	Yes	Yes	Yes	25	Yes	Yes	No	Yes	Yes		$ 100,000.00	$ -	

	Workforce Development	5541	6/1/2017	Shepard State Park Recreational and Ecological Enhancement	The City of Gautier has assumed the daily operations and management of this 395-acre park, which is located south of U.S. 90 along Graveline Road. Currently, the park consists of eight miles of trails, with a mix of developed and primitive camp sites throughout. In addition, the park has disc golf and a premier outdoor archery range with 28 lanes. The City has increased the utilization of the park by the addition of these amenities and has hosted national archery tournaments, bringing tourists from all over the United States to participate, as well as state high school archery teams and Senior Olympics tournaments. SEC college archery has also expressed interest in using the facility for its conference championship. The facility is one of few within the state of Mississippi and is unique to the state due to its surroundings. The City is already home to the Mississippi Sandhill Crane National Wildlife Refuge and offers birding and wildlife eco-tours of its swamps and bayous, resulting in eco-tourism visitors from all 50 states and numerous other countries each year. The City seeks to add amenities and upgrades as set forth below to Shepard State Park to further enhance, capitalize on and increase the number of tourists for its eco-tourism attractions. The City plans to expand the recreational opportunities available at Shepard State Park to assist in developing this pristine park into one of the southâ€™s premier nature destinations. Expansion of the existing nature trails will be implemented to reach additional areas of the park. Shepard State Park is home to a variety of wildlife native to the coastal area, such as great white egrets, pelicans, eagles and osprey. Additionally, other woodland creatures reside in the area, including deer, wild rabbits, opossums, foxes, raccoons and more. In the surrounding bayous, visitors can see turtles, alligators, wild geese, and a wide variety of fish. Strategically placed resting areas and observation decks will be constructed for creating an environment for optimal opportunities to monitor the wildlife and bird watch, as the park is listed on the Mississippi Coastal Birding Trail. The existing road network throughout the park is in need of repairs. The City is proposing to complete such repairs, clear underbrush and remove invasive species of vegetation. Furthermore, new water and sewer lines will be placed to upgrade and expand sites within the park with such amenities to support additional restrooms, pavilions and playground areas. Power lines and park friendly lighting will be installed to delineate the appropriate pathways for visitors throughout. Due to the age of the park, many upgrades are needed, and this project would include walking trail upgrades, including new foot bridges in low-lying areas prone to flooding, trail clearing, a rehabilitated small boat launch and fishing pier, updated and repaired grills, fire pits and picnic tables at RV sites, an amenities building with laundry facilities and recreational game tables, educational plaques for the trails, fire pits, an outdoor classroom, a natural playground, traditional playground equipment, kayak launches, a lodge to accommodate guests and overnight studies in conjunction with the outdoor classroom, a new bathhouse and bathroom renovations. The City envisions that the lodge will be utilized by educational institutions, including the Mississippi Gulf Coast Community Collegeâ€™s Jackson County campus located within the City, and other educational institutions utilizing the premier archery range as part of their sports curriculum. Mississippi Wildlife Rescue has also expressed interest in utilizing Shepard State Park as a research and rehabilitation site. Additionally, the City has recently acquired a historic two-story log cabin, The Wilson House, and is relocating the house to the entrance of Shepard State Park to serve as a welcome center, visitorâ€™s center and general store for park visitors/campers. That project is currently underway. The park also has another large home on adjacent land that is in need of repair. The City has plans to upgrade this house for community meetings and small events. The City plans to leverage Tidelands, Recreational Trail Program and Land Trust for the Mississippi Coastal Plain funds and other available funding opportunities to complete some of the amenities in its long-term plan stated above. This project would promote long-term economic growth and increase economic development through eco-tourism and recreational opportunities that are unique to the coastal area. The City already has an established eco-tourism base, and these additions would encourage these tourists from all over the United States and other countries to stay and play in the Coastal region of our state, particularly in Gautier, Mississippi. Gautier is unique to have an almost 400-acre park within its City limits.	Jackson	Yes	Yes	Yes	50	Yes	Yes	Yes	Yes	Yes		$ 9,000,000.00	$ -	
	Workforce Development	5542	6/1/2017	Gautier Town Center (The Commons Park)	The City of Gautierâ€™s Town Center is located in the Central Business district, and plans are currently being developed for revitalizing the property of the old Singing River Mall into a major retail development for the City, Jackson County and the outlying areas. The proposed development being considered would include an open air mall, box stores and national tenants to attract interstate commerce. Jackson County does not contain a mall; however, there was one within the City of Gautier prior to the BP oil spill. It has since been torn down and suffered greatly as a result of the oil spill. The Gautier Town Center Project is located in Gautierâ€™s central business district. The Town Center is anchored by municipal buildings, commercial strip centers, MGCCC, and the mall project. Due to Gautier being situated along Highway 90 and being a â€œyoungâ€ city, it has no downtown area. Furthermore, Gautier is home to a Waste Pro home office, and a transfer station is proposed along Beasley Road, which is a dead end road that currently provides the only ingress/egress for a landfill, Waste Pro, municipal buildings, residential neighborhoods and heavy commercial uses. Therefore, the Town Center Project includes a network of roadways to facilitate the new town center commercial development and provide a connector from Gautier-Vancleave Road to Beasley Road. The Gautier Town Center Project incorporates 0.5 miles of roadway and 1 mile of multi-use pathway to link together retail, residential and recreational areas. It will also provide the transportation infrastructure necessary to accommodate the industrial type development nearby. The City has approximately 33 acres of property immediately north of the Town Center. The City has leveraged funds from both Tidelands and the Coastal Impact Assistance Program to acquire the property necessary for the Commons Park and to provide initial transportation infrastructure, lighting, sidewalks and streetscape improvements for the planned project. The City is proposing to develop a large recreational area and public park in conjunction with the Commons Development. A great portion of the property consists of wetlands. Throughout these areas, nature trails will be constructed to permit public access throughout this pristine ecological area. Small pavilions and tree houses will be placed along these trails to provide resting areas and opportunities to view the wildlife. Educational plaques depicting the wildlife and various species of plant life will be strategically placed throughout the nature trails explaining the wildlife habitat and ecological area. The center portion of the park will consist of a Great Lawn and festival grounds that will be a focal point for large crowd gatherings. The City of Gautier has an annual Mullet and Music Festival, which is held in conjunction with Cruisinâ€™ the Coast. The City of Gautier anticipates becoming an official stop for Cruisinâ€™ the Coast in the near future and is already an event destination. The Mullet and Music festival and Cruisinâ€™ the Coast brings thousands of people from throughout the country to the coastal area, resulting in substantial revenue for the coast region and the state as a whole. These annual events are unique to the Mississippi Gulf Coast and Gautier. To the west end of the lawn, there will be a large open pavilion that will be designated for special events such as festivals, family reunions, and so on. An amphitheater is proposed for the east end of the lawn and would be utilized as an outdoor entertainment venue. Positioned along the south edge of the lawn, there will be a multiuse football/soccer field, restrooms, pickleball courts, and a musical playground area. The multiuse football/soccer field would also be utilized as a vendorâ€™s site and festival grounds to support special events. In addition, the property currently has a small lake, which will be expanded and enhanced. The Great Lawn and a portion of roadway and trails are strategically positioned as such to provide immediate access to the small lake. Enhancements for the lake would include adding benches and a musical water feature to create a serene recreational area for visitors.	Jackson	Yes	Yes	Yes	80	Yes	Yes	No	Yes	Yes		$ 15,000,000.00	$ -	
	Workforce Development	5548	4/12/2017	The SBCF New Wave Center for Innovation and Technology	Small Business Capital Fund of MS, Inc., (SBCF) is a 501c3 US Department of the Treasury Community Development Financial Institution (CDFI) that specializes in finance programs and technical assistance for MS businesses and has done so since 1994. As an administrator of several MDA small business assistance programs since the 1990â€™s, SBCF is uniquely qualified to address at least five of the eight key areas of focus of the GoCoast 2020 goals as set forth by Governor Phil Bryant in 2012. SBCF is most fortunate, as well, to have the full support and endorsement of Governor Bryant and his office with the submission of this request, and thereafter, if selected. The key areas that SBCF would address include: Workforce and Economic Development, Small Business Assistance, Research and Education and Infrastructure. If afforded this opportunity, SBCF would collectively address these areas by designing/building and operating a facility that would provide both incubator and accelerator services to coastal area start-up and existing businesses. Through an expansive technical assistance platform, SBCF would provide entrepreneurs and business owners with innovation tools and strategies, targeted access and approaches to research and resources, access to certain industry specific training and certification programs such as the ISO/IEC 27000 family of standards for cyber security to protect their IT environment as well as ISO 9000 training and certification to help organizations to most effectively and efficiently fulfill the needs of both their internal and external audiences while meeting statutory and regulatory requirements. SBCF would also work with large employers by facilitating personal development, guided self-help, programs for their employees such as, â€œYour fiscal self affects your physical self. Learn how, why and what to do about it.â€ Though designed to assist employees with tools and information to address and correct credit and financial issues, the employer ultimately benefits as it eliminates use of company time and distractions handling personal matters resulting in increased productivity, bottom line and overall company morale. As the majority of efforts would be centered on infrastructure, SBCF would enhance its offerings to prime and subcontractors, public and private agencies and organizations in construction and transportation-related industries as well as provide access to complementary or peripheral services such as bonding agents and professional service providers that cater to those industries. It is SBCFâ€™s desire to assist with rejuvenating the MS Gulf by providing a space that will make way for the next wave of business leaders, startups, entrepreneurs and forward-thinking companies to excel by linking the knowledge and experience of the past with the innovation and technology of the future. In short, our project is Gulf coast eco-gardening at its best!	Harrison,Jackson	Yes	No	Yes	60	Yes	Yes	No	Yes	No		$ 7,500,000.00	$ 250,000.00	
	Workforce Development	5551	5/3/2017	Pollinator Health for Food, Wildlife and People- Public and Private Lands Environmental Education	Pollinator Health in Urban and Rural Communities Pollinator health is about our social and economic impacts and how all citizens can play a role in its success. Many times research on environmental projects do not have the opportunity to be applied on the ground in a variety of venues with nontraditional audiences. So, if research does impact citizens of all walks, it can result in a greater success rate for the mission and when data and knowledge is disseminated in a unique way it supports fulfilling its true potential or establish greater span of those impacted by the benefits. This project puts research, education, BMPs, technology and education in the hands of local citizens and community leaders that can make a difference on their properties, their community public lands and specialty crop farmers. Most local citizens do not have a clue how pollinator health impacts the quality and production of their food. The MUFC network provides a very hands-on opportunity to determine if citizens in these audiences can gain a better understanding of the role they play in pollinator health, the practices they can implement and why itâ€™s important. MUFC has many years of using research data and applying it to our cities and towns and the citizens living in and near these communities. The ultimate challenge of any research is applying that research on the ground, providing sound technology transfer, demonstrating best management practices and supporting the mission through creative partnership and collaborations. We will work through our municipal partners to conduct the workshops and implement the pollinator sites. Currently, MUFC has 97 communities in our Bloom Town Mississippi program with every community on the coast included. All of these are willing to host a pollinator health sites. Other local partners will include local community leaders, civic groups and private producers and land owners to install 12 demonstration sites and provide a series of outreach and education venues. Through this project we will partner with the groups we currently in our network and even new collaborators to include: workshops, hands on implementation of planting, social networking, local press, newsletters, web site, and large data base contacts. Contacts in the project include industry partners, mayors, city leaders, civic groups, chambers, parks and recreation professional, arborist, forester, landscape architects and citizens. Proposed metrics include multiple sources of information as outline in detail in the pre-proposal. Any data, surveys, charts, photo journal or other information generated as a result of this project will be public information and available for FAR or other research to use as needed.	George,Harrison,H	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ 110,000.00	$ 75,000.00	
	Workforce Development	5555	5/15/2017	Sewer Infrastructure Rehab Project	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The Districtâ€™s certificated area is located within watershed areas that drain with open ditches and nominal amounts of subsurface drainage. The discharge points for these watershed areas are tidally influenced due to the geographical location of the Districtâ€™s certificated area. Located along the Southern Certificated Area Boundary is the Northern Shoreline of the Bay of St Louis, the Western Certificated Area Boundary is the East Shoreline of Rotten Bayou and the Northern Certificated Boundary is the Southern Shoreline of Rotten Bayou and Bayou LaSalle. Forty years ago the clay sewer mains were installed in the Districtâ€™s certificated area at the primary material for sewer mains. At the time of installation, pipe bedding standards were not as widely understood as they are today. The rigid nature of clay makes it very brittle and when unstable soil conditions are introduced, cracking will occur. Once a clay sewer pipe cracks and starts to leak the surrounding soil enters the pipe with any flow creating voids and uneven loads and eventually the pipe will collapse. The District is currently experiencing large amounts of inflow and infiltration as a result of a large portion of our infrastructure consisting of cracked and leaking 40 year old clay pipe that needs rehabilitation. The increase in I&I causes excess amounts of water into the sewer infrastructure resulting in sewage overflows, costly cleanup and potential hazards to the environment The scope of work for this project is to rehabilitate 174,250 lineal feet of cracked, broken and failed clay sewer mains, point repair mains and remove roots. The rehabilitation of the clay sewer mains will consist of cured-in-place pipe (CIPP) and CCTV of all mains after rehabilitation. The Districtâ€™s CCTV software will need to be updated in order to complete reports necessary reports and proper documentation of the rehab improvements. The benefit of this project is to restore and conserve habitat; restore water quality; replenish and protect living coastal and marine resources and enhance community resiliency.	Hancock,Harrison	Yes	Yes	Yes	80	Yes	No	No	Yes	No		$ 6,732,000.00	$ -	

	Workforce Development	5558	5/16/2017	Old Fort Bayou Road at I-10 Interchange	The Jackson County Board of Supervisors is proposing the construction of a new Interstate 10 interchange with Old Fort Bayou Road. The right-ofâ€™way is available for immediate consideration for construction and would strategically position a new access point for entry into Jackson County from Interstate-10. Centrally located approximately four miles east of the Washington Avenue/Highway 609 exit and approximately four miles west of the Highway 57 exit, this interchange would provide much needed relief from traffic congestion in this heavily traveled area of the I-10 corridor. The Washington Avenue/Highway 609 area has experienced tremendous growth in the last few years as the population tends to migrate to the north, and this interchange would help to alleviate the substantial traffic burden in that area in addition to providing easy access to prime developable property adjacent to Interstate 10. Not only would this interchange serve to improve the lives of the local community, but it also provides opportunities for the establishment of new service industries such as gas stations, hotels and restaurants to attract travelers. Safe, modern, and easily accessible transportation routes are key to promoting and sustaining long term economic growth. Because the I-10 corridor is a heavily traveled interstate highway, and this area continues to see growth, a new interchange point would greatly enhance the desirability for development. The short term economic impacts would be felt immediately throughout the community. From the creation of construction jobs, the demand for materials, services and equipment to the need for food, housing and other goods, this project would help to stimulate the local economy. The Old Fort Bayou Road and the I-10 interchange is the next logical step in promoting growth in this area. In addition to other proposed road improvements, this interchange will greatly enhance the profitability and livability in this area for years to come.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 30,000,000.00	$ -	
	Workforce Development	5559	5/16/2017	McCann Road Overpass	This project consists of construction of a new overpass at McCann Road and Interstate 10 in the St. Martin Community. This new overpass will provide a direct connection from the Commercial Business District along Lemoyne Blvd. to the new Commercial Business District along the I-10 Connector road, thereby increasing access and opportunity for new growth in this area. The addition of this strategic access linking two commercial business districts will maximize the growth potential for both areas. The short term direct economic stimulus will be immediately felt throughout the community in the form of employment and income for the construction industry and indirectly by many others who are employed by companies that provide materials, equipment, and services that are required to support the project. Workers for whom jobs are created by this project have new income to spend on consumer goods and services, which in turn creates new jobs in retail, manufacturing of consumer goods, food processing and personal services. A vision for the future, neighborhood support, and infrastructure are key elements to attracting developers to invest in existing communities. The implementation of several major access routes along the two developing business corridors provides for multiple transportation routes for businesses and consumers, thereby strengthening the potential for continued growth. The overall economic benefits will be realized initially as a financial stimulus for the area based on construction activities, and subsequently the functional integration of the structure will benefit the expansion of the community for many years. Growth in this area is sustained by the local community, bolstered by a growing population, and positively impacted by consumers that choose to travel to this increasingly popular shopping destination across county and state boundaries.	Jackson	Yes	No	Yes	100	Yes	No	No	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5560	5/16/2017	Pascagoula River Scenic Trail	Water trails are marked routes on navigable waterways such as rivers, typically for people using small non-motorized boats, such as kayaks and canoes. Originally created by environmentalists and conservationalists to encourage environmental awareness, they have evolved to be recreational routes on waterways with a network of access points. The Pascagoula River is the largest by volume unimpeded river in the contiguous 48 states. This project will develop ecotourism opportunities by establishing and developing a scenic water trail along the Pascagoula River. This scenic water trail will bring sustainable rural development to communities along the river in Jackson County. As the Stateâ€™s first water trail, it will serve to strengthen and extend recreational opportunities for residents and visitors. Trailheads will be constructed in four strategic locations along the river. Each trailhead will provide amenities such as public boat and kayak launch, pavilions, parking for visitors, and a kiosk with a map of the area. Although new to the State of MS, water trails have been implemented in other states and studies have been conducted to measure their economic impacts. While dissimilar in their measurements and time frames for data collection, each report shows that water trails can increase paddle sports tourism and bring new money into local economies. The studies also explored social benefits to a community and found that water trail communities experienced lower poverty rates and higher education and health levels than communities that do not provide recreational activities. Increased tourism around water trails will bring additional tourism dollars to the community. The Pascagoula Water Trail will create tourism travel to Mississippi by being the first Water Trail in the state, strengthen Jackson Countyâ€™s tourism economy through travel on nearby waterways, grow recreational opportunities with promotion of the Pascagoula River and highlight the historic significance of the waterway. The proposed locations for the trailheads are as follows: â€¢Northern Trailhead â€“ Cedar Creek area â€¢Roy Cumbest Trailhead â€“ Wade Vancleave Road â€¢Hickory Hills Trailhead â€“ Near Hickory Hills Golf Course â€¢South Trailhead â€“ Located near Gautier at U.S. Highway 90	Jackson	Yes	No	Yes	70	Yes	Yes	No	Yes	Yes		$ 3,000,000.00	$ -	
	Workforce Development	5561	5/16/2017	Radio Read Water Meter Project	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The District has 4,295 aging water meters, over 54 percent of the meters are older than 10 years and of the 54 percent, 73 percent are over 15 years. Due to the age of the Districtâ€™s meters, the District is losing revenues and unaccountable water loss. Aging water meters, experience a breakdown of accuracy over time. The breakdown results is less accurate water meters that leads to lost revenue because the consumption of water is not completely recorded. In an article published in Water and Waste Digest, (Dr. Hans D. Allender, 2000) test results consistently proved that water meterâ€™s recording capability diminishes over time. The article reported the results of an analysis that included sampling of a number of meters in one zone based on age and flow; low, intermediate and fast. After the accuracy of the meters were calculated, the gallons of water going through the meters without being recorded were calculated by subtracting the average consumption from the result of the multiplication of the RAM (the Real Accuracy of Meters). An average consumption of 9,000 gallons was used in this analysis based on a typical household and historical data considering the summer peak consumption. The recorded results were as follows: Meters 15 Years Old 9,000 Gallons - (9,000)(0.994) = 54 Gallons per month Meters 20 Years Old 9,000 Gallons - (9,000)(0.990) = 90 Gallons per month Meters 25 Years Old 9,000 Gallons - (9,000)(0.958) = 378 Gallons per month Meters 30 Years Old 9,000 Gallons - (9,000)(0.816) = 1,656 Gallons per month Based on the data from this report and the age of the Districtâ€™s meters, the District is losing approximately 279,108 gallons per month and monthly water/wastewater revenue of $ 1384.38, yearly $16,612.56.	Hancock	Yes	Yes	Yes	85	Yes	No	No	Yes	No		$ 750,000.00	$ -	
	Workforce Development	5562	5/17/2017	Master Sewer System Study	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The District has significant amounts of inflow and infiltration, aging sewer mains of which 47% are 30 plus year old sewer clay pipe, lift stations and discharge force mains that need all need to be reviewed for current and future service needs. The district needs a Master Sewer System Study conducted for the sewer collection system to: evaluate inflow and infiltration, lift stations and discharge force mains; to serve as a logical, cost-effective framework for making organizational changes; to assist with meeting new environmental regulations and for environmental impact. The scope of work for this project will consist of advertising for RFQâ€™s, selecting a firm to complete the Master Sewer System Study and completion of the Study. The benefit of this project is to evaluate the Sewer System hence creating a tool that will assist with significantly reducing flood waters from entering the sewer infrastructure, reducing sewage overflows hence restoring water quality; replenishing and protecting living coastal and marine resources; restoring and conserving habitat and enhancing community resiliency and to assist with meeting new environmental regulations and for environmental impact.	Hancock	Yes	No	Yes		Yes	No	Yes	Yes	Yes		$ 100,000.00	$ -	
	Workforce Development	5729	8/15/2017	Harrison County Sheriff's Department Training Academy	The Harrison County Sheriff's Department Training Academy is a full-service training academy that offers basic certification and advanced courses in communications, corrections and law enforcement. The academy is a collaborative partnership between the Harrison County Sheriff's Department and the Mississippi Gulf Coast Community College. The instructor pool of the Academy is comprised of practitioners; ensuring attendees receive real, practical training. The current pool of cadets come from the private and public sectors spread throughout the entire State of Mississippi. The Academy also trains self-sponsored cadets that were unemployed upon enrollment and hired by Law Enforcement Agencies upon completion of the program; the agencies that hired the trained cadets are also spread throughout the state. The Sheriff's Department is currently leasing the property and facility where the Training Academy is held and is at capacity. The Sheriff's Department is seeking funding in order to build a state of the art Training Academy that will allow them to become a premier destination for law enforcement training in the Southeastern United States.	Harrison	Yes	No	Yes	90	No	Yes	No	No	No		$ 5,000,000.00	$ -	
	Workforce Development	5750	10/16/2017	MDMR Remote Setting Facility	The oyster industry is an integral part of the Mississippi Gulf Coast â€“ its economy, its history and its culture. The oyster industry has suffered greatly because of several natural and man-made disasters since 2005, including Hurricane Katrina, the BP Oil Spill and three separate openings of the Bonnet Carre Spillway (2008, 2011 and 2016). In 2004, oyster fishermen in Mississippi harvested nearly 500,000 sacks of oysters. In 2012, there were no sacks harvested, and in 2016, about 40,000 sacks were harvested. Gov. Phil Bryant created the Governorâ€™s Oyster Council on Restoration and Resiliency in 2015 to address the problems this industry faces and to come up with solutions. One of those solutions is a remote setting facility. The Mississippi Department of Marine Resources (MDMR) is proposing to construct, operate, and maintain a large-scale remote setting facility at the Port of Gulfport. This facility would assist in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast. The proposed funding would allow for the planning, construction, operations, and monitoring activities that will be conducted to evaluate and document restoration effectiveness. If awarded, the MDMR has the resources, procedures and personnel to implement,MDM manage and operate a large-scale remote set operation to help increase the production of the natural reefs. The proposed facility would allow MDMR to increase the amount of spat (oyster larvae after it attaches on cultch material) introduced into the MS Sound and monitor the health and growth of those oysters. Remote setting is a method of producing oysters that differs from natural oyster production. Remote setting is the production of oyster spat by setting hatchery-reared larvae onto cultch (hard material for oyster larvae to attach usually shell, crushed concrete or limestone) at a remote location from the hatchery; spat are then planted on-bottom or off-bottom. Remote setting has been successfully implemented for the production of oysters along the Pacific coast and the Chesapeake Bay areas of the United States. Remote setting was developed in the Pacific in response to low natural oyster production as a result of over harvesting, pollution, siltation, disease and predation (Jones and Jones 1983, Henderson 1983). Initially, the Pacific coast oyster industry depended on imported seed, which became an unreliable source; however, with the development of hatcheries along the Pacific coast, remote setting continued to develop and thrived (Henderson 1983). In the Chesapeake Bay Area, remote setting developed in an effort to increase oyster production and to utilize disease-resistant larvae produced by hatcheries (Congrove et al. 2009). In Mississippi, the oyster industry relies primarily on planting cultch and naturally produced oyster larvae (wild larvae) to set on the material to produce market oysters. According to the â€œStrategic Framework for Oyster Restoration Activities,â€Oyster reefs provide a broad variety of ecosystem services, including water quality improvement, shoreline stabilization (and associated habitat protection), carbon burial, habitat provisioning for fish and mobile invertebrates (including commercially and recreationally important species), habitat for epibenthic fauna, diversification of the landscape, and oyster production for commercial and recreational harvest. Because of their reef-building capabilities, oysters are commonly referred to as natural ecosystem engineers. The complex habitat formed by oysters enhances the recruitment and growth of economically valuable and ecologically important finfish and crustaceans, thereby increasing these speciesâ€™ productivity. Oysters filter sediments, phytoplankton, and detrital particles from the water column, potentially reducing turbidity and improving water quality. Oyster reefs also promote bacterially mediated denitrification, thereby counteracting nitrogen loading. By filtering water and enhancing light penetration, oysters promote other valuable estuarine habitats such as submerged aquatic vegetation. Nearshore oyster reefs can reduce erosion and stabilize coastal shorelines through sediment trapping and accretion, and by adding hard substrate adjacent to marsh edges. Intertidal oyster beds provide foraging sites at low tide, when the shellfish are accessible, to shorebirds such as the American oystercatcher. Although native oyster reefs have declined in many regions, the Gulf of Mexico oyster reefs are among the most productive in the world, with subtidal reefs supporting a robust oyster fishery. In 2015, the Gulf States produced 53 percent of the total U.S. oyster landings, with a dockside value of $99.3 million. The eastern oyster also has cultural and historical importance to the GOM region. Oysters, along with other mollusks, have been an important food	Harrison	Yes	Yes	No		Yes	Yes	Yes	No	No		$ 9,360,000.00	$ -	

	Workforce Development	5751	10/19/2017	USM Ocean Engineering and Unmanned Maritime Systems at the Port of Gulfport	Statement of Need: The State of Mississippi has made extraordinary investments in its marine science and education enterprise around the Port of Gulfport. The acquisition of the research vessel Point Sur was possible with support at the Port, and future growth of the maritime â€¯Blueâ€™ Economy will be fostered by academic research and education activities at the Port. The investments will yield results in economic and workforce development and emerging Unmanned Maritime Systems used by the US Navy, other federal agencies and industry. Statement of Work: The USM Port of Gulfport Marine Research Facility will be completed in Spring 2018, and the funds will be used to purchase state-of-the-art fabrication and engineering equipment, information and teaching technologies, building furnishings and ship support equipment. The building is constructed by Mississippi State Port Authority, and USm is entering into a long-term Lease Agreement to occupy the building. USM must provide all furnishings, information technology, research vessel support equipment and engineering/fabrication equipment. Detailed items for acquire will be submitted, but a general breakdown is provided here. Financial Request: Engineering/fabrication equipment ($1,170,000) Transport vehicles/lifting capacity ($500,000) Warehousing infrastructure ($100,000) Facility staff machinist start up ($200,000) Small boats shop ($75,000) Furnishings ($130,000) Information/teaching technology ($225,000) Total Request: $2,400,000	Harrison	Yes	No	Yes		So	Yes	Yes	No	No	No		$ 2,400,000.00	$ -	
	Workforce Development	5763	2/19/2018	Unmanned Maritime Systems Technology Program	Mississippi Gulf Coast Community College (MGCCC) seeks to work with interested partners in the development and implementation of an Unmanned Maritime Systems Technology Program to support businesses and industries that directly support the unique environmental and ecosystem structures of the coastal geography and the Northern Gulf of Mexico. The program will be located in Jackson County, Mississippi on the Jackson County Campus (JC) of MGCCC and will complement the existing career and technical programs on campus, a thriving local maritime industry, and a growing scientific community. The proposal herein will not be static and will be informed by and updated as directed by current coastal efforts associated with unmanned maritime systems, inclusive of the work of the Governorâ€™s Ocean Task Force. MGCCCâ€™s Unmanned Maritime Systems Technology Program will be a technical education program that will provide students with the opportunity to become employed in a growing industry. Information provided by the Duke Center on Globalization, Governance and Competitiveness indicates that the industry is a $156.9 million-dollar industry that is growing at a rate of 13.8% annually. The program will contain classroom, lab based, and field-based instruction and will seek out industry and university partnerships in support of the program. Courses will focus on systems IT, systems maintenance, systems operations, systems security, systems manufacturing, systems usage, troubleshooting, and the industry in general. The program location will be on the collegeâ€™s Jackson County Campus (JC). The campus is located in Gautier, Mississippi; logistically accessible from both Interstate 10 and Highway 90. The location makes it feasible for on-site programs to serve Mississippiâ€™s coast and the region beyond. Programmatically, the campus is home to academic transfer programs, workforce training programs, career, and technical programs. Programs such as programs in electronics, instrumentation and controls, systems-based electronics, and automation are complimentary programs to an Unmanned Maritime Systems Technology program. Additionally, JC is home to the collegeâ€™s Estuarine Education Center (EEC); a 40+ acre development along Mary Walker Bayou which grants water access to the Pascagoula River, the accompanying estuary systems and the Gulf of Mexico. Within the EEC are facilities offering classrooms, science labs, and industrial facilities that can/will house equipment for the operation of an Unmanned Systems program. The timeframe for development and sustainability attainment will be a period of 5 years, with year one being the development period and years 2 â€“ 5 being instructional years. It is anticipated that at the end of the 5-year period that the program will be sustainable within the college. Objective 1: Development of an Unmanned Maritime Systems Technology program at MGCCCâ€™s Jackson County Campus. Activities will include seeking accreditation for the new program, hiring of program personnel, development of curriculum, development of an industry-specific recruitment and admissions plan and identification of an advisory committee. Outcomes of these activities are approval and accreditation to begin the Unmanned Maritime Systems Technology program, program curriculum specific to this industry, a recruitment plan developed, the admissions processes established and the training location identified. Objective 2: Implementation of an Unmanned Maritime Systems Technology program. Activities for the implementation objective of the Unmanned Maritime Systems Technology program will	Jackson	Yes	No	No		Yes	Yes	No	No	No		$ 4,663,914.00	$ -	
	Workforce Development	5765	2/25/2018	Mississippi Oyster Shell Recycling Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding an oyster shell recycling program that engages Mississippi restaurants, oyster processors, and the general public to establish a recycling program that provides free oyster shell pickup, training, and drop-off locations to recycling otherwise discarded oyster shells. Oyster shells are the preferred cultch material for oyster reef restoration but due to their limited supply has been used minimally in recent restoration efforts. Alternative cultch materials have thus far proven to be largely ineffective at restoring oyster reefs in the Mississippi Sound. Funds for this project would include the procurement and management for necessary collection materials, transportation vehicles, employees, land for shell staging, and heavy equipment for shell sanitation. Similar successful projects have been implemented in other Gulf states such as Alabama, Louisiana, and Texas. The Mississippi Commercial Fisheries United, Inc. launched a successful pilot oyster shell recycling effort in 2017 that focused on collecting oyster shells at a local seafood festival; nearly 2,000 lbs of oyster shells were collected in one day. A detailed project proposal and estimated project budget for the proposed Mississippi Oyster Shell Recycling Program included as an attachment.	George,Harrison,J	Yes	Yes	Yes		Yes	No	Yes	Yes	No		$ 300,000.00	$ 50,000.00	
	Workforce Development	5766	2/25/2018	Reef Fish Community Permit/ Quota Bank	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Reef Fish Community Permit/ Quota Bank. Mississippi is the most under served state in the commercial Gulf reef fish fishery. Mississippi has the least amount of Gulf reef fish permit holders and individual fishing quota shareholders. This project would help to increase commercial access to reef fish species such as red snapper; a variety of groupers; a variety of tilefish; and various other fish species that require a federal Gulf reef fish permit to harvest commercially. This program would also help to reduce dead discards in the reef fish fishery by providing the needed quota to harvest fish that would otherwise have to be discarded at sea. This project would greatly benefit Mississippiâ€™s coastal economy by increasing access and landings for several species of reef fish. Mississippi's commercial fishermen, seafood dealers, seafood markets, and restaurants would all benefit from this project. Similar programs have been implemented across the Nation to provide community protections for limited access commercial fisheries. Visit www.catchinvest.com to learn more about permit and quota banks work. The need to diversify the income of seafood industry members is greatly needed due to the severe decline in revenues generated from the local oyster and shrimp industry following the BP oil spill.	Hancock,Stone,Jac	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 1,000,000.00	$ 50,000.00	
	Workforce Development	5767	2/25/2018	Seafood Traceability and Tagging Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Seafood Traceability and Tagging Program. This program would provide an electronic platform (i.e.; smart phone, tablet, and computer) and physical tags for commercial fishermen to improve domestic seafood traceability and help to eliminate fraud in the seafood industry. The need for this program arises from the prevalence of illegal and unreported seafood sales that undercurrent honest and legal seafood harvesters and businesses. This program would provide electronic reporting and tagging capabilities for commercially harvested marine species such as speckled trout, red fish, flounder, shrimp, blue crabs, and oysters. Similar programs have been implemented in federal fisheries with great success. In addition to eliminating fraud in the local seafood marketplace; this program would help promote domestically caught seafood and provide a story to the who, how, and when the seafood was caught. This program would also help to increase the value of Mississippiâ€™s commercially harvested seafood. Funds would be used to create a smart phone reporting application and purchase physical tags. Funds would also be required to employ managers of the program and conduct outreach to fishermen. An incentive base program is suggested to encourage participation in the program.	Hancock,Jackson,H	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 1,000,000.00	$ 50,000.00	
	Workforce Development	5768	2/25/2018	Off-Bottom Oyster Aquaculture Advancement & Investment Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Off-Bottom Oyster Aquaculture Advancement & Investment Program. Off-bottom oyster aquaculture has been proven successful in surrounding states and is currently pending permit approval in Mississippi territorial waters. This program would help establish a cooperative for potential off-bottom oyster farmers and investment capital to help jump start the off-bottom oyster aquaculture industry in Mississippi. The program would also help to increase Mississippi overall oyster production and provide stimulus to Mississippiâ€™s coastal economy. Currently, obtaining sufficient investment capital is a barrier to entry in the off-bottom oyster aquaculture industry. Preliminary estimates place the cost of entry into the industry at about $50,000 per acre. The program proposed would give traditional oyster harvesters and oyster industry members priority to access funds that could be used to establish private off-bottom oyster farms.	Hancock,Jackson,H	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5771	2/25/2018	Shrimp Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Shrimp Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the shrimp industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a shrimp industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfill the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the shrimp industry and local community.	Hancock,Jackson,H	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 250,000.00	$ -	

	Workforce Development	5777	4/10/2018	Sustain American shrimp processing industry with strategic investments	Overview of the Mississippi processing industry: The U.S. Shrimp processing industry is located in the five Gulf States region. While processors are shrinking in number, Mississippiâ€™s six processors have increased their share of the domestic shrimp processing market, processing approximately 30 million pounds of shrimp each year compared to Mississippiâ€™s 6 million pound annual catch. Processors are the crucial first link in the supply chain that delivers fishermenâ€™s harvests to the U.S. market through retail distribution, food suppliers and restaurants. Shrimp processed in Mississippi have a $100 million value when exported from Mississippi into the supply chain, a significant value-added industry, with significant economic impact on the state of Mississippi. Mississippi processors provide 2,300 jobs to the state of Mississippi, directly and indirectly. Jobs directly attributed to processing hit a post-Katrina high in 2015, more than 1600 â€“ even in light of direct processing jobs in Gulf states shrinking from 14,000 to 11,000 in the same time period. And, while the number of Mississippi processing jobs has fluctuated since 2006 due to natural and man-made catastrophes, it has bucked the national trends, growing when the U.S. number of processing jobs was in decline. Mississippiâ€™s ability to grow this industryâ€™s output, and economic impact in a stagnant / shrinking national industry demonstrates that with strategic investment in innovation, growth has occurred and can continue in the future. For more than a decade, Americans have consumed more shrimp than any other type of seafood, and the amount of shrimp that Americans are consuming continues to rise. In fact, in 2017, Americans ate an average of 4.4 pounds of shrimp per person, compared to 4.1 pounds in 2009. And 4.1 pounds of shrimp per person is nearly twice the per-capita consumption in 1990. Wild shrimp harvesting and processing are heritage industries of the Mississippi Gulf Coast, inextricably tied to our past, but that can be preserved and sustained for the future with the proper strategic investments. Mississippiâ€™s six processors have demonstrated resilience and innovation in the face of challenges. To capitalize on this opportunity, the industry and individual businesses within it must achieve the premium product positioning of wild caught domestic shrimp in the mind of consumers. And through sustained and strategic marketing efforts, reap the economic benefits of a higher price through every level of the supply chain, including fisherman. The challenges: Mississippi wild caught shrimp are harvested from the Gulf waters, not â€œraised to order.â€ Therefore, supply is limited. The law of supply and demand would likely have driven wild caught shrimp prices higher, if not for the rapid rise of international aquaculture and the marketing, infrastructure and finance that supports it. The domestic shrimp industry, which is the backbone of the Gulf Coast fishery, has gone from being the primary supplier to U.S. markets to representing today only 10 % of what Americans consume. 90% of the demand is served by imported, farm-raised shrimp â€“ which comes to the U.S. under loose regulations, subsidized by foreign governments, and sometimes laced with dangerous levels of antibiotics. Disasters, both natural and manmade, wreaked havoc on the industry, first with Katrina in 2005, and then the BP oil spill in 2010. First Katrina wiped out supply chains, and as the industry began to recover its working waterfronts and infrastructure, the Deepwater Horizon tragedy sent the industry reeling while questions regarding the safety of Gulf fisheries were investigated and resolved.	Harrison,Jackson	Yes	No	Yes		Yes	No	Yes	Yes	No		$ 2,400,000.00	$ 240,000.00	
	Workforce Development	5780	5/21/2018	Ocean Springs High School Aquaculture Expansion	This project will be based on the addition of two fully equipped greenhouses at Ocean Springs High school. By adding these new greenhouses, Ocean Spring High School (OSHS) will be able to increase the number of students who take aquaculture classes at OSHS, and it will also successfully maintain the program for 3-4 years. This past year, 89 students signed up to take Aquaculture. At the current size, full capacity is 36 students (18 per class) and 18 students for aquaculture 2 classes. The addition of two new greenhouses would give each class its own building. This would increase class sizes from 18 students to 25 students in each class for a total of 75 students per year. These students will be trained and graduate with work force skills in aquaculture, water quality, and any marine fisheries job that may become available. The program also focuses on eco-restoration. In the past, the program has raised, oysters, blue crabs, speckled trout, tilapia and striped bass. The oysters, blue crabs and speckled trout were released in the Mississippi Sound. With the addition of the greenhouses, other species will be evaluated to be included in the program. The greenhouses are also used in collaboration with kindergarten and fourth grade students as they come to the high school and learn systems with planting and raising fish. Students then grow these plants in smaller greenhouses and eat what is grown. In addition to these greenhouses, a smaller greenhouse will be opened to the special education department. This greenhouse will be used by their students to grow vegetables and other resources to use in their classes.	Jackson	Yes	Yes	Yes	17	No	Yes	Yes	No	No		$ 290,000.00	$ -	
	Workforce Development	5795	7/20/2018	Urban Natural Resource Job Training	The MS Urban Forest Council developed a project in 1995 with EPA, creating a program to help people learn about careers in the green industry and provide job training opportunities in regard to natural resources such as landscaping, trees, food plants, growing food, land maintenance, cut flowers, and other "green jobs." The program was called 'Ribbons of Green Career and Job Training.' We are proposing this project to assist in restoring the MS Gulf Coast from injury of natural resources but also to provided valuable job training and career development. Many people are not aware of the many opportunities working with natural resources. Natural Resource Job Training and Small Business Incubator The project will include job training in the classroom and training on sites. Site for training will be identified based on topic of training, location of participants and relative to the topics. This community garden and farming space is the perfect location for a job training and small business incubator center. Not only will this project provide real-time economic opportunities to the trainees; it will also help develop and revive the surrounding communities, while rebuilding and growing the green industry along the MS Gulf coast. This project would create training programs that satisfy needs of employers in the state. The following programs would be implemented: Job training and certification as a trained individual would be provided for each of these topics. Individuals participating will complete the whole training program. Trainers will provided assistance in obtaining jobs in these areas of service or be trained to develop their own company to provide these service areas. 1. Farming-Food, vegetable, fruit and herb production a. Vegetable growing and harvesting b. Nursery training (growing seedlings & fruit tree propagation) c. Cut flower growing, harvesting d. Landscape gardening e. Arborist g. Yard Maintenance 2. Value-added processing		Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ 323,000.00	$ 75,000.00	
	Workforce Development	5852	9/10/2018	Mississippi Coastal Improvement Program (MsCIP) Deer Island Ecosystem Restoration Program	Scope of Work: This Project will complement the existing Federal restoration projects at Deer Island by minimizing the fracturing of diversity and creation of an additional 400 acres of highly productive wetlands, beach and dune and maritime forest habitat. Planned improvements include restoration of a portion of the northern and southern shorelines of the island, and new stone training dikes to prevent future erosion. Project will also restore emergent coastal tidal marsh, restore vital nodal connections of marsh/estuarine habitat for Gulf Sturgeon (threatened species) feeding and nursery use as well as federally protected migratory species, project will restore critical winter habitat for Piping Plover (threatened species), and nesting habitat for raptors including Bald Eagle as well as listed sea turtles, project will also fully restore barrier island and natural hydrologic conditions to MS Sound as well as historical inflows of Gulf water into the sound area. The project will also fully restore historic geomorphic features through restoration, stabilization of island elevations and shoreline profiles. Background and Cost: A feasibility study was completed in September 2009. The recommended total project, estimated to cost $25,800,000 with an estimated Federal cost of $16,770,000 and an estimated non-Federal cost of $9,030,000. Of this amount, $1,231,000 is estimated to be needed to complete PED (design phase elements) with an estimated Federal cost of $800,000 and an estimated non-Federal cost of $431,000. Funding Status: This project is currently unfunded. The next potential chance for funding will be from the FY 20 (October 2019) budget. Ahead of this, local non-Federal Sponsor support via a Letter of Intent will be needed. Would like to further discuss the LOI with you going forward.	Harrison	Yes	Yes	Yes		Yes	No	Yes	No	Yes		$ 25.00	$ 431,000.00	
	Workforce Development	5855	10/25/2018	William Carey University College of Osteopathic Medicine at Tradition	William Carey University is a private, non-profit university with an in-depth history in the State of Mississippi, dating back to 1892. William Carey University (William Carey) provides quality educational programs, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society. William Carey currently has campus locations in Hattiesburg, MS, the Tradition Medical City in Tradition, MS and in Baton Rouge, LA. William Carey has a vast amount of educational offerings that can be found in the following colleges and schools: College of Health Sciences, College of Osteopathic Medicine at Hattiesburg Campus, School of Arts and Letters, School of Business, School of Education, School of Music and Ministry Studies, School of Natural and Behavioral Science, School of Nursing, and School of Pharmacy. William Careyâ€™s Tradition Campus, which opened in the fall of 2009, offers majors in art, business administration, elementary education, health related professions, nursing, and psychology. The University has recently reached a significant milestone with its School of Pharmacyâ€™s completed construction and its inaugural class of 57 students admittance this past July, with the capacity of 192 students and the creation of 34 new full-time equivalent jobs. The School of Pharmacy offers a three-year accelerated Doctor of Pharmacy program with an innovative curriculum that provides students with the knowledge and skillset required to excel as an entry-level practitioner. William Careyâ€™s School of Pharmacy is determined to make a difference in the lives of those who suffer from health issues such as diabetes, obesity, drug and tobacco addiction and asthma. In the spring of 2018, Southern Mississippi Planning and Development District commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern Mississippi to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippiâ€ Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development and serve as a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for the future growth of William Carey University and Tradition based around the success of other existing business and industry clusters at Lake Nona, Florida, and Research Triangle Park in North Carolina. Based on these findings, the continued growth of William Carey and Tradition will make the Mississippi Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the region and the state. As the first institution of higher learning to locate in the Tradition Medical City, William Carey has experienced enhanced opportunities to partner with industry-recognized collaborators and has exceeded their own expectations with their budding campus at Tradition. Such partnerships include Mississippi Gulf Coast Community Collegeâ€™s Bryant Center School of Nursing and Simulation Lab, Gulfportâ€™s Memorial Clinic at Tradition, and the National Diabetes and Obesity Research Institute (NDORI). Following the success of their School of Pharmacy, William Carey is planning to expand their medical offerings by opening an additional College of Osteopathic Medicine at the Tradition Campus. The development of the new College of Osteopathic Medicine at Tradition will allow for an enhanced partnership with NDORI and their efforts to reduce diabetes and obesity in the State of Mississippi. As found in the attached economic impact study, in 2016 over 371,622 Mississippians suffered from diabetes (over 15.4% of the state population). With nearly 1 in 6 Mississippians affected by diabetes,	Harrison	Yes	No	Yes	83	Yes	Yes	No	No	No		$ 60,000,000.00	$ -	
	Workforce Development	5861	11/14/2018	Biloxi Career and Workforce Training	The Biloxi Career and Workforce Training (BCWT) program evolved from an economic security grant funded by W. K. Kellogg Foundation and awarded through East Biloxi Community Collaborative. We are requesting funding to continue the Biloxi Career and Workforce Training program which will include two sessions, Spring 2019 and Fall 2019 to Biloxi residents ages 18-50. Each participant must complete a Career Readiness course prior to advancing to Electrical and General Construction. The career readiness curriculum includes training specific to financial awareness, basic computer skills, resume writing, interviewing techniques and credit reporting. OMS Knights of Peter Claver, Council 25 provides a weekly electrical class which is held each Thursday for 10 weeks. The goal of the electrical training is to advance participants to Helper/Apprentice level. The electrical curriculum content is presented from NCCER Electrical: Level 1. Curriculum consists of: OSHA safety, construction math, blueprint reading, basic electrical training, wiring, identification of tools and materials, cost and material estimation and in-the-field training experience. Additionally, OMS Knights of Peter Claver, Council 25 provides a weekly general construction class. General construction training class is held each Saturday for 10 weeks. The goal of the general construction training is to advance participants to Helper/Apprentice level. The general construction curriculum content is presented from NCCER Core Curriculum: Introductory Craft Skills. The general construction curriculum consists of: OSHA safety, construction math, blueprint reading, basic construction skills, identification of tools and materials, cost and material estimation and classroom/in-the-field training experiences. Participants conclude the training by visiting worksites to practice job and environmental safety.	Harrison	Yes	No	No		Yes	Yes	No	No	No		$ 30,000.00	$ 3,500.00	

	Workforce Development	5864	12/14/2018	Pearl River County Open Broadband Fiber Internet	Objectives - Pearl River County Open Broadband Fiber Internet is an exploration of the economics and methods of providing open access high-speed broadband fiberoptic internet access to all of the county. Open access provides the fiberoptic infrastructure while providing equal access to internet service providers to service their customers. Fiberoptic infrastructure installations are essentially infinitely wide thus only the electronics limit the speeds provided to the customers. There is little to no competition for affordable high-speed internet in the county if it is available at all. What is available is either low speed or unaffordable for the majority of the residents. Broadband is not an ordinary product. It is essential infrastructure â€" the platform on which most commerce now depends. It has high start-up costs that take years to recover. When telecommunications prices are too expensive or speed too slow and unreliable, all businesses and residents suffer. Much like towns bypassed by canals, rails, or highways, future prospects are bleak for communities without adequate access to the Internet. Communities that do not invest in their own next-generation networks will likely not see any significant broadband investment in the near future. Benefits - Benefits include encouraging economic development, increasing access to education, and improving the quality of life. Many of the benefits are indirect, or spillover effects in economic terms. Lower prices for telecommunications services mean more money in household and business budgets, and new jobs and business expansions mean increased tax revenue for local governments. These benefits to the community result in no direct benefit to the network owner, which is why private companies like Spectrum and AT&T have less incentive to invest at this level. This projectâ€™s mission allows it to incorporate indirect benefits to the community when evaluating its return on investment. A private company evaluates its success in some respects based on the amount of money that flows from the host community to distant investors, a public network maximizes the money left in the community. Activities â€" Grant funds will be used for forming a board of directors, consulting with the various advocacy organizations, obtaining legal advice, attending trade shows to evaluate vendors, providing accounting, and various ancillary expenses. Expected Outcomes â€" The business plan will be the ultimate goal of this project. It will determine the budget, sources for funding, methods and routes for fiber installation, and organizational structure. The expectation is that the recent population increase will eventually be accelerated due to the economic benefits of attracting jobs due to the affordable high-speed internet availability.	Pearl River County	Yes	No	Yes		Yes	Yes	No	Yes	No	Since this	$ 500,000.00	$ -	
	Workforce Development	5870	2/11/2019	Gigabit Gulf Coast and High-Tech Workforce	Mississippi Gulf Coast Community College proposes the Gigabit Gulf Coast and High-Tech Workforce project which will include the deployment, physical installation and connection of a Gigabit Gulf Coast fiber infrastructure tailor-made to meet the Coastâ€™s unique needs and requirements. In addition, MGCCC proposes to construct a Center of Excellence for Advanced Technology and offer high-tech workforce training to include Cybersecurity, Coding, Artificial Intelligence, and Virtual Reality. Mississippi Gulf Coast Community College (MGCCC) can play a unique role in helping to unify the disparate entities on the coast to accomplish these tasks. The broadband infrastructure of Mississippi has largely been in the hands of giant businesses with agendas that may not align with the interests of businesses, governments, or citizens of the Gulf Coast. In 2019, the Mississippi Broadband Enabling Act was signed into law, which allows electric power cooperatives across the state to offer high-speed internet service to its customers. Once a core cyber ring is in place, this law would allow the electric power cooperatives to take high-speed Internet service to the rural areas through the Gulf Coast region. By quickly building a future-proof pure fiber network, a Gigabit Gulf Coast can control and transform its digital future. It would establish timely, redundant, universal and affordable ultra-high speed internet connectivity. Local governments, businesses, and citizens together will spark innovation and draw new investments, develop new approaches to familiar services such as transport, education, health, utilities, and entertainment, and jump-start new ways of doing business that can take full advantage of an increasingly virtualized global economy. A vibrant fiber infrastructure will introduce a new set of challenges for everyone in the Gulf Coast region. It would be myopic to create a Gigabit Gulf Coast without training the workforce alongside this advancement to encourage innovation and protect businesses, organizations, and citizens. Objective 1: The physical installation of the fiber and connection of the key sites. This activity will proceed in as little as one or two years with new deployment technology. Activities will include first connecting public sectors, educational entities, and commercial sites with the most urgent and intensive demand. The next step will connect businesses, data centers, innovation hubs, and industrial parks that rely on data for their commercial existence. Ultimately, the pure fiber network will function as a backbone for deployment to individual homes, providing residential access to ever-richer forms of digital services and entertainment. Service providers will begin offering services over the new network and bring new applications, features, content, and services to run over the near-infinite capacity provided by the pure fiber technology. Speeds will reach least a 100 gigabit-per-second-internet connection across the Coast. Objective 2: A Center of Excellence for Advanced Technology will be located on the Jefferson Davis Campus which will house cutting edge high-tech training programs and be tied to a world-class facility to experiment with technology and offer online programs to students around the globe. Activities will include the construction of the center, equipping the center with high-tech instructional equipment and hiring of instructors. Objective 3: Four programs will be developed and implemented to include Cybersecurity, Coding, Artificial Intelligence and Virtual Reality/Augmented Reality. Descriptions of these programs follow.	Harrison	Yes	No	Yes	15	Yes	Yes	No	No	No		$ 26,000,000.00	$ -	
	Workforce Development	5777	4/10/2018	Sustain American shrimp processing industry with strategic investments	The U.S. Shrimp processing industry is located in the five Gulf States region. While processors are shrinking in number, Mississippi's six processors have increased their share of the domestic shrimp processing market, processing approximately 30 million pounds of shrimp each year compared to Mississippi's 6 million pound annual catch, a crucial part of the Blue Economy, both economically and environmentally. Processors are the crucial first link in the supply chain that delivers fishermen's harvests to the U.S. market through retail distribution, food suppliers and restaurants. Shrimp processed in Mississippi have a $100 million value when exported from Mississippi into the supply chain, a significant value-added industry, with significant economic impact on the state of Mississippi. Mississippi processors provide 2,300 jobs to the state of Mississippi, directly and indirectly. Jobs directly attributed to processing hit a post-Katrina high in 2015, more than 1600 â€" even in light of direct processing jobs in Gulf states shrinking from 14,000 to 11,000 in the same time period. And, while the number of Mississippi processing jobs has fluctuated since 2006 due to natural and man-made catastrophes, it has bucked the national trends, growing when the U.S. number of processing jobs was in decline. Mississippi's ability to grow this industry's output, and economic impact in a stagnant / shrinking national industry demonstrates that with strategic investment in innovation, growth has occurred and can continue in the future. For more than a decade, Americans have consumed more shrimp than any other type of seafood, and the amount of shrimp that Americans are consuming continues to rise. In fact, in 2017, Americans ate an average of 4.4 pounds of shrimp per person, compared to 4.1 pounds in 2009. And 4.1 pounds of shrimp per person is nearly twice the per-capita consumption in 1990. Wild shrimp harvesting and processing are heritage industries of the Mississippi Gulf Coast, inextricably tied to our past, but that can be preserved and sustained for the future with the proper strategic investments. Mississippi's six processors have demonstrated resilience and innovation in the face of challenges. To capitalize on this opportunity, the industry and individual businesses within it must achieve the premium product positioning. Competition within the U.S. shrimp markets with foreign producers is expected to continue as aquaculture producers utilize more direct transportation routes and find ways to reduce production and transportation costs. The aquaculture industry also has the ability to grow products to meet expected consumer preferences and deliver those products to markets in a uniform manner. Additionally, all of the wild caught and imported shrimp combined cannot meet the growing consumer demand. Foreign governments recognize this, and they have invested in significantly larger and more aggressive subsidies and marketing campaigns backed by multi-national corporations and orchestrated by national marketing boards. Because of this, there is an acute need for help to â€œreverse the slideâ€ of an American industry that is rooted in Mississippi's cultural heritage. Having been one of the industries most directly impacted by natural and man-made disasters, processors are in need of a partner to sustain their long-term investment in the future. With new funding, we seek to disrupt the market with innovative new strategies and tactics while continuing to fund traditional marketing out of the processors' pockets.	Harrison,Jackson	Yes	No	Yes		Yes	No	Yes	Yes	No		$ 8,400,000.00	$ 8,400,000.00	
	Workforce Development	5876	3/4/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: - Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; - On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; - Delivery of medical supplies and support to areas that are inaccessible to first responders; - Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and - Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison, Washington,Orleans,Perry,Forrest, Pearl River,Jackson,St Tammany,Stone, Hancock,Mobile	Yes	Yes	Yes	72%	Yes	Yes	Yes	Yes	Yes		$ 3,250,000.00	$ -	
New	Workforce Development	5876	4/16/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: • Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; • On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; • Delivery of medical supplies and support to areas that are inaccessible to first responders; • Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and • Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison, Washington,Orleans,Perry,Forrest, Pearl River,Jackson,St Tammany,Stone, Hancock,Mobile	Yes	No	Yes	72	Yes	Yes	Yes	Yes	Yes		$ 3,250,000.00	$ -	

New	Workforce Development	5878	4/17/2019	Biloxi Upstream and Downstream Storm Water Education and Community-Engaged Green Infrastructure	The people that live, work and visit the Biloxi peninsula are all within a few hundred yards of the Biloxi Back Bay or the Mississippi Sound and their actions have immediate impacts on the environment because all the stormwater runs into marine water either directly or by way of one of several bayous leading to the Back Bay. In the past few years most of the streets and the storm drainage systems on the peninsula have been or are being replaced, a situation that is positive as far as moving stormwater out of streets but will increase the stormwater impact on the bayous and back bay with more and faster moving storm water. What is more, the construction work itself has impacted the natural waterways due to increased silt running into the bayous from unpaved roads. The time for the Biloxi peninsula is right for a comprehensive community-engaged stormwater management campaign that improves and creates both upstream and downstream green infrastructure. Upstream, the project will improve the quality and quantity of water that enters the storm drainage system with four related activities: 1. Environmental education with Biloxi Public School students 2. Stormwater education to residents of the Biloxi peninsula 3. Low-impact development training and design resources for developers and city staff 4. A property owners small-grant program to do on-site and neighborhood-scale green infrastructure projects. Downstream, the project will improve the stormwater quality and quantity that enters the marine environment with two related activities: 1. Restoration and improvements of natural waterways that connect storm drainage to the Back Bay, especially Keegan Bayou and Bayou Auguste, which have been impacted most by the road construction work. 2. Coordination and leveraging of on-going and planned projects to bring green infrastructure planning and funds to install and maintain landscape areas Environmental education with Biloxi Public School students. For the past seven years GCCDS has developed and implemented educational outreach programs with Biloxi Junior High School, East Hancock Elementary, St. Martin High School, and with middle school students in the Gulfport School District. During the summer of 2017, GCCDS received funding through the National Marine Sanctuary Foundation in partnership with NOAA to further modify the curriculum for a summer program with the Boys and Girls Club of Hancock County. Measures of success: Over 400 students and teachers reached through direct programming with several hundred more potentially reached through exhibitions of work to parents, local leadership and the larger community. Outcome: Change of behavior for students, their families and larger community to reduce trash and pollution entering storm water drainage system. Stormwater education to residents of the Biloxi peninsula. The project will build upon the City of Biloxi's ongoing stormwater management resident outreach as well as with community workshops in conjunction with the property owner small grant program. Measure of success: outreach to all Biloxi residents through B-Mail and other media, at least 10 community workshops. Outcome: Change of behavior for residents to make improvements on their property to reduce run off and to reduce trash and pollution entering the stormwater drainage system. Low-impact development training and design resources. GCCDS will work with the City of Biloxi to develop training and explore possible incentives to promote low-impact development. Measure of success: Low impact development training material tailored to the Biloxi peninsula. Outcome: Economic growth with improved development Property owners small grant program to do green infrastructure projects. Around 20% of the proposed funds will have a direct impact on citizen's quality of life by making upstream stormwater improvements in the community. At least 75 small grants between $2500 and $5000 will be awarded to property owners on the Biloxi peninsula who apply for assistance to do green infrastructure projects on their property or on property along the streets in partnership with the city and with other property owners in their neighborhood. With the completion of the road and stormwater	Harrison	Yes	Yes	Yes	60	Yes	Yes	No	No	No		$ 2,080,000.00	$ -	
New	Workforce Development	5879	4/17/2019	KHSA Assault Landing Strip	This 4000' X 60' concrete Assault Landing Strip (ALS) will be constructed adjacent to the Airport's runway and provides needed training to local and transient US Military forces. The ALS supports Keesler Air Force Base's 403rd Tactical Airlift Wing, 815th Tactical Airlift Squadron and 53rd Hurricane Hunters' training missions. This specific designed asset will support transient C-130 airwings and joint warfighting training & readiness training. This project supports Naval Special Warfare (Special Boat Team 22 (SBT22), Naval Small Craft Instruction & Technical Training School (NAVSCIATTS), and WARCOM) at NASA's John C. Stennis Space Center, the U.S. National Guard's Combat Readiness Training Center (CRTC) at Gulfport-Biloxi International Airport (GPT)and the State's Camp Shelby. This project will support, Mississippi State University's ASSURE Center for Unmanned Aerial Systems (UAS, Vertical Take-offs & Landing Platforms (Both CV-22 & helicopters) and horizontally launched spacecraft as the Hancock County Port & Harbor Commission seeks Mississippi's first and only Federal Aviation Administration (FAA) Space Port License.	Hancock	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 7,627,318.00	$ 766,500.00	
New	Workforce Development	5880	4/17/2019	Gulf Coast Mitigation Credit Program	Wetlands mitigation costs have historically been identified as a hinderance to economic development throughout the Mississippi Gulf Coast Region. SMPDD seeks to secure a pool of readily-available wetlands mitigation credits from private sector mitigation bank inventory for use on qualified, Corps-permitted projects, leveraging volume purchasing power to deliver significantly discounted credits and facilitate economic development efforts. Using the requested funding to "buy down" the price of available credits will accelerate mitigation credit availability, and substantially decrease mitigation costs which have long served as barriers to potential projects.	Hancock,Jackson, Harrison,	Yes	No	No		Yes	No	No	No	No		$ 1,500,000.00	$ 500,000.00	
New	Workforce Development	5881	4/17/2019	Harbor Expansion Parking Area	Along the beachfront, adjacent to the Gulfport harbor, across from the upcoming Aquarium attraction, and with access to downtown's food and beverage, gaming, and lodging, the area around Gulfport's Jones Park / Barksdale Pavilion has become the City's hub for tourism. With the expansion of recreational activities and tourism in this area, the City of Gulfport has an immediate need for additional parking. Complimenting an adjacent lot, the proposed expansion of parking along the eastern edge of Jones Park will promote workforce development by providing additional areas for workers to park, will provide visitors access to tourism, eco-tourism, and recreational activities, provide additional public access for residents and visitors to the beach and fishing opportunities, and provide access to the educational benefits associated with the new aquarium. Ultimately this parking area will ensure inadequate parking will not stifle Gulfport's booming economic development. This additional parking will complement the proposed expansion of the Gulfport Harbor. It is proposed at the southeast corner of 20th Avenue and U.S. Highway 90 and will be asphalt-paved and striped to match adjacent areas. Any end cap islands will be constructed with curb and gutter and landscaping commiserate with the area will be added.	Harrison	Yes	No	Yes	75	Yes	Yes	Yes	No	Yes		$ 2,000,000.00	$ -	
New	Workforce Development	5882	4/17/2019	On-Site Animal Holding and Facility Operations Building	Development of on-site facilities at Mississippi Aquarium to house ambassador animal collection that the aquarium uses for educational outreach both at the aquarium and at schools throughout the state. The facility will also enlarge our on-site animal holding and treatment capacity to care for more animals on site and provide space for maintenance shops to handle rebuilding of pumps and equipment to increase life expectancy. Small office space for the maintenance team and aquatic team will also be included. This space will provide opportunities to partner with Mississippi higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Vetenirary Technician Training Program, as well as creating opportunities at the high school level. This building would go on the footprint of the Masonic Lodge Building.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 1,750,000.00	$ -	
New	Workforce Development	5885	5/2/2019	Development of	The ARC will build the body of knowledge around the growing One Health movement, a collaborative effort of multiple health science professionals â€“ veterinary medicine, human medicine, environmental, wildlife and public health â€“ to attain optimal health for people, animals, wildlife, plants and our environment. By exploring the connection between health and the environment, this interdisciplinary approach can help protect present and future generations. Over the last three decades, approximately 75% of new emerging infectious diseases have been zoonotic, meaning the diseases have been transmitted from animals to humans. Research that studies the link between human, animal and environmental health is critical to our future, yet much of the work in this area has been focused on terrestrial species. By exploring the connection between health and the environment, The ARC can help protect present and future generations. Given the centrality of water to human life, and the great diversity of species and habitats our ocean supports, there is an urgent need for research focused on aquatic ecosystems. Not only will this research lead to a greater understanding of the public health risks of contaminated seafood, beaches and water, but it could also lead to new treatments and medicines that are marine based. This space will provide opportunities to partner with Mississippi's higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 2,500,000.00	$ -	
New	Workforce Development	5896	10/7/2019	STORM SURGE BARRIERS FOR BAY ST. LOUIS & BILOXI BAY	I HAVE A NEW CONCEPT FOR THE DESIGN AND CONSTRUCTION OF HURRICANE STORM SURGE BARRIERS, BARRIERS THAT ARE SPECIFICALLY DESIGNED FOR OUR UNIQUE BAY MOUTHS. i HAVE THE APPROVAL OF THE CONCEPTS BY CLARK STANAGE, WHO IS THE LEAD WATER CONTROL ENGINEER FOR THE WEST COAST US ARMY CORPS OF ENGINEERS, AND HAS BEEN SO FOR THE PAST 30 YEARS. HIS HOME PHONE # IS (916) 487-5215. MY BARRIERS ARE A SERIES OF ISLANDS ACROSS THE BAY MOUTHS. SEPARATING THE ISLANDS ARE CONCRETE CULVERTS, WITH FLAT BOTTOMS FLUSH WITH THE BAY FLOORS. THEY HAVE VERTICAL SIDES, NO TOPS. HINGED TO THE SIDES OF THE CULVERTS ARE STORM SURGE BARRIER GATES, similar in concept to cattle gates across a road. THESE GATES ARE NEVER CLOSED, EXCEPT DURING A HURRICANE OR A HIGH-FLOODING TIDE. AS A STORM SURGE APPROACHES OUR BAYS, AND THE SS WATER LEVEL GETS 9" HIGHER THAN A HIGH TIDE, THE GATES START TO FLOAT, AND THE INCOMING WATER CLOSES THEM. TO A VEE, NOT A WALL. A VEE SIMILAR TO THE BOW OF A SHIP, WHICH WILL BREAK UP THE SMASHING WAVES. THE STORM SURGE HIGH WATER HOLDS THE GATES CLOSED, THEY ARE NOT LOCKED CLOSED. WHEN THE SS GOES DOWN, THE HIGHER WATER INSIDE THE BAYS BLOWS THE GATES BACK OPEN. OTHER DETAILS PROVIDE FOR SHIPPING LANES, AND RAILROAD BRIDGES. I AM CURRENTLY WORKING WITH GULF COAST PRESTRESS FOR THE CONCRETE CULVERTS, AND TALKING TO ENGINEERING COMPANIES FOR THEIR ASSISTANCE. FURTHER PLANS AND LOCATION DRAWINGS ARE AVAILABLE ON REQUEST.	HARRISON, JACKSON, HANCOCK	Yes	No	Yes		Yes	Yes	Yes	Yes	Yes	COMPLETE PROTECTION FROM STORM SURGE	$ 100.00	$ -	
New	Workforce Development	5897	1/24/2020	Walter Anderson Museum of Art Creative Complex	The Walter Anderson Museum of Art requests $1,554,000 for Phases 2-4 of the Creative Complex, a campus expansion for coastal discovery and innovation, public access, and quality of life empowered by immersion in the natural world. The Creative Complex, a combined 15,000 square feet of interior and exterior spaces and public gardens, will be a center of education and recreation where visitors make connections to 21st century landscapes and applications, including those in science and technology, aquaculture and foodways, tourism, environmental stewardship, and restoration. The purpose of the project is to cultivate lifelong curiosity and connection to place through the convergences of culture, economy, education, and the environment. As American author Wendell Berry writes, â€œNeither nature nor people alone can produce human sustenance, but only the two together, culturally wedded.â€ Art, as a force for meaning-making and cultural resonance, is critical to the story of the Gulf Coast's resiliency. Walter Anderson's art contributes to the region's public education systems, tourism and community development, and conservation efforts. His studies of flora, fauna, and landscapes â€“ and his history of exploring the barrier island wilderness â€“ provide points of ignition for recreational and research-based programs that connect communities to their estuarine landscapes, as well as to the urgent need to study and protect them. WAMA's partners in science and restoration, including The University of Southern Mississippi Marine Education Center and the Grand Bay National Estuarine Research Reserve, are looking to art to communicate about complex systems. â€œOur goal is conservation, but conservation is complicated,â€says Dr. Ayesha Gray of the Grand Bay NERR. â€œConnecting nature, art and science is part of the heritage of the Gulf Coast and that legacy is exemplified by Walter Anderson's work,â€says Kelly Lucas, Ph.D., Interim Associate Vice President for Research of Coastal Operations and Director of the Thad Cochran Marine Aquaculture Center at The University of Mississippi. â€œ[Walter] Anderson is THE artist of the Gulf of Mexico,â€writes Jack E. Davis in his Pulitzer Prize-winning environmental history, 'The Gulf: The Making of an American Sea.' Anderson's journeys to the federally-designated wilderness of Horn Island from the 1940s through 1960s exposed him to its biodiversity and its scientific and geographical importance. He depicted its hurricanes, its animal and plant life, its eroding sands, and its unadulterated brilliance. â€œ... His lines are vivid, limber, and alive,â€continues Davis. â€œThey are the lines of the Gulf of Mexico and its wildlife. They transpired from his search for wholeness in nature, a â€˜significant form' that he sought to discover not merely from the visual form but from the biological, by touching, feeling, listening, and even tasting.â€ This art history sets the stage for programs and excursions, both on land and water, that merge recreation, observation, and creative communication with geographical study, microplastics sampling, beach restoration, oceanography, and environmental science. Programs at the completed Creative Complex will focus on five areas: Nature and Conservation; Science and Technology; Industry and Business; Culture and Community; and Art and Creativity.	Jackson	Yes	No	Yes	70	Yes	Yes	No	Yes	Yes		$ 2,500,000.00	$ 900,000.00	
New	Workforce Development	5900	4/30/2020	TYR Resolution	Transitional housing for veterans to assist in stabilizing their return to being a productive citizen. Purchase property to house up to 6 veterans coming out from programs within the Biloxi Gulf Coast Veterans Health Care System (VA hospital). Whether they are coming out of the PTSD, Alcohol or Drug rehabilitation they need a place for temporary housing until HUD/VASH can get them long term housing - rather than rushing them into a drug trafficking location or a similar non-healthy recovery location. Currently, several go back out to homelessness and return to being a problem to society. This facility would provide them 24 hour management, temporary shelter in a clean environment, provide food and counseling on site, as well as retail experience working on site; thereby, starting a working resume. A coffee shop would be built on this property to provide a job for these veterans transitioning without them having to worry about transportation or safety in walking to and from work as well as provide continued income for sustainability for this program. This stage is estimated to cost $1.5 Million and provide the state of Mississippi valuable productive tax paying citizens, provide the city a property that has sit vacant for 10 years to be used, property taxes paid and rid of rats and vermin - along with business growth, homelessness resolution, crime reduction and self sustaining citizens. (1 full time employee and 3 part time employees)	Harrison	Yes	No	Yes	35	Yes	No	No	Yes	No		$ 1,500,000.00	$ 27,000.00	Land Acquisition

New	Workforce Development	5946	11/25/2020	Gulf Coast CSET Tech Fusion - Advanced Technology Training for the 21st Century	In the new Millenia, the evolution of digital technologies has radically changed the way we live and work. This revolution has also changed the demands that citizens, businesses, and other organizations have placed on the digital society. However, the Mississippi Gulf Coast faces a severe lack of well-trained IT workers. Gulf Coast Tech Fusion will focus on developing an IT workforce for economic expansion, innovation, and societal growth. Tech Fusion will bring together a dual focus within the CSET building: (1) provide IT training and (2) provide flexible facilities to develop IT solutions for the development and implementation of regional business technology solutions. and industry. Gulf Coast Tech Fusion will provide to students requisite training in emerging technologies (e.g., Cybersecurity, Coding, Artificial Intelligence (AI), Virtual Reality (VR)/Augemented Reality (AR), and Simulation/Game Design) that could make the Gulf Coast region an international leader in the high-tech sector. This program would provide momentum to accelerate a trained IT workforce and opportunities for business and industry to upskill incumbent workers. For example, MGCCC is partnering with EON Reality to create a center of excellence for extended realities (XR); XR is an umbrella term for all immersive technologies, such as AR, VR, mixed reality (MR), and those that are still to be created. This program would help to develop the next generation of talent to develop these technologies, and it would provide support to companies to explore and develop training via XR. As for future-proofing, a push to identify a center of excellence to create AR and VR training is now critical. This would allow training to continue in spite of any external factors that may come requiring remote worker and/or social distancing. Gulf Coast Tech Fusion will be housed in the Center for Security and Emerging Technology (CSET) â€" further leveraging a BP Restore project (i.e., CSET). The CSET building received partial funding in an earlier round of BP Restore projects, so this proposal includes the request to fund the remainder of the CSET building. Operating Tech Fusion in CSET will provide Mississippi Gulf Coast Community College (MGCCC) with a platform to conduct cutting-edge IT training and develop solutions for local businesses and industry. The region must invest in equipment and infrastructure to facilitate this training, future-proof the Mississippi Gulf Coast, and better mitigate unexpected disasters in the future. Specific spaces within CSET will be used for corporate training and development, while other areas of CSET will focus on credit instruction in IT. In some areas, the training needed above may require that equipment be purchased to facilitate the training. MGCCC will create technology enhanced (aka, HyFlex) classrooms that allow for seamless synchronous communication with students/incumbent workers remotely. That is, the HyFlex classrooms will allow students and incumbent workers to remotely engage in the class and/or training. MGCCC proposes a total of $7 million dollars for the Gulf Coast Tech Fusion project. Three million dollars will fund training efforts described above, and four million will help to secure the remaining funds needed to construct the CSET building. It is the intent of MGCCC to utilize funding to provide IT training and provide flexible facilities for the development and implementation of business technology solutions on the Harrison County Campus (formerly Jefferson Davis Campus) in Gulfport, MS as the physical location. Due to the technological advances that will be located in the Center for Security and Emerging Technology (CSET), the following training programs could be offered virtually or online to students around the globe. •Cybersecurity â€" The threat of hackers, malware, and social engineering could compromise or harm information assets. In order to combat this threat, MGCCC established a robust training program for cybersecurity. The program will produce a competent workforce quickly to create an ecosystem of healthy information assurance. MGCCC revitalized their curriculum to align with the National	Harrison	Yes	No	No		Yes	Yes	No	Yes	No		$ 7,000,000.00	$ 3,000,000.00	
New	Workforce Development	5947	11/25/2020	PAWS (Pets and Wildlife) Exploratorium	HSSM is seeking funds to construct a new facility on their property, which will serve as an education and community event location. Set in a nature-inspired landscape, the PAWS Exploratorium will provide an aesthetically pleasing venue at the juncture of 28th Street and Highway 49 and we will also get with the Gulf Coast Restoration Initiative to create a nature trail in conjunction with the new facility. This new area will focus on education and conservancy of all animals while also focusing on the human component of humanity-which is already at the center core of HSSM's mission and ingrained culture related to animal welfare and humanity. This facility will provide an additional mission based attraction for families to visit while being complimentary to and not competitive with surrounding aquatic organizations. The facility will feature live engaging exhibits with animals such as turtles, snakes, opossums, raccoons, etc., enhanced interactive educational opportunities, children's activities, a small Re-Tail store, various nature trails for bird watching and a pollinator path. The Exploratorium will also be open and available to other animal welfare organizations, such as Wild at Heart Rescue and Audubon MS and can be a destination for several local summer camps such as the City of Gulfport Summer Camps and Lynn Meadows Vet Camp. The facility will utilize existing HSSM land and will enhance current programs while also serving as a centrally located site for partner organizations. This new facility will perpetually support HSSM's lifesaving efforts and strive to educate the importance of animal welfare, preservation, conservation and humanitarianism. We will seek guidance from top architect consulters that have worked on tourist engaging projects in order to create an engaging and interactive experience for all attendees. The requested funds would support design and construction plus year 1 operations and encourage ongoing fundraising. HSSM plans to sustain PAWS by funneling Club Paw summer camp registration fees back into the program and by requesting parent/teacher organizations to provide a small fee for students and charge additional adult fees for each tour/education session as well as special event rental fees. Because of PAWS HWY 49 location-a major tourist access road- and its proximity to the Aquarium, we plan to partner with the Aquarium and possibly the Institute for Marine Mammal Studies to offer joint tourism tickets. In addition, we will use our extensive individual & corporate donor network as we have an established fundraising platform for our mission based initiative. We will also share trained HSSM staff with the new facility and veterinarians are already in place and could partner with local community colleges such as MGCCC for workforce training and internships. PAWS could potentially raise additional funds by hosting a snack bar that sells only local products from Pop Brothers, Karen's Cookies and other local businesses as well.	Harrison	Yes	No	Yes	90	Yes	Yes	No	Yes	Yes		$ 1,123,500.00	$ 224,700.00	

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Research and Education	7	10/18/2013	Restore watersheds	FEMA is making flood insurance too expensive for many waterfront properties Property owners and the environment would both be well served by purchasing those properties and returning them to their natural state resulting in a better buffer in anticipation of the next Katrina like storm.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	22	10/19/2013	PVRV Resorts	Solar-Powered RV Resorts described in attachment. Build PV carports high enough to park motorhomes, trailers and even mobile homes in the shade. The idea is to make money from thesun and from renting recreation spaces in the shade. Same concept could be used for more permanent housing for senior citizens living in disaster resistant modular housing.	Hancock Harrison, Jackson	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 1.00	$ -	
	Research and Education	24	10/21/2013	Monitoring Population Ecology of a Critical Coastal Bioindicator, the Mississippi Diamondback Terrapin (Malaclemys terrapin pileata)	The Mississippi diamondback terrapin (Malaclemys terrapin pileata) is an estuarine turtle that exclusively inhabits coastal bays and salt marshes along the Atlantic and Gulf of Mexico coasts. It is considered a keystone species that contributes to the maintenance of salt marsh integrity. Terrapins were once abundant throughout their range; however, knowledge gaps exist regarding the viability of populations in many areas of the Gulf coast, including Mississippi. Numerous threats adversely affect terrapin populations including habitat loss, crab trap mortality, and nest predation. In addition to these current threats, pollution from the Deepwater Horizon oil spill degraded vital salt marsh habitats in the northern Gulf of Mexico. Monitoring a long-lived species in a disturbed environment can provide insight into the extent of damage to the particular species along with its habitats and prey. Because the diamondback terrapin is a long-lived species and plays an important role in these estuarine habitats, it represents a critical bioindicator of the health and integrity of salt marsh ecosystems. Salt marshes in Mississippi provide both ecological and economic gains to the stateâ€™s residents; therefore, monitoring the status of a bioindicator of these important habitats will benefit the state. Long-term surveys of diamondback terrapin populations in Mississippi were initiated in 2012, and these surveys are conducted in both salt marsh channels and nesting beaches. The surveys will continue to monitor the health, reproductive success, and population ecology of the diamondback terrapins so that an adequate assessment of short- and long-term damage to this declining species and its vital habitat can be made. This project will be a collaborative partnership between the Institute for Marine Mammal Studies and the University of Alabama at Birmingham.	Hancock Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	25	10/21/2013	Enhancement of IMMS Public Outreach and Education Programs	The events surrounding the Deepwater Horizon oil spill stressed the need for having a well-informed citizenry regarding marine conservation and restoration. A key to this goal is to support education and outreach programs whose mission is to teach the public about the great natural resources of the Gulf of Mexico. The Institute for Marine Mammal Studies â€" Center for Marine Education and Research (IMMS-CMER) is a premier marine education and conservation facility that offers a variety of educational programs designed to meet the academic and outreach needs of multiple audiences on educational topics including marine mammals, sea turtles, fish biology, marine invertebrates, threatened/endangered species, invasive species, point and non-point pollution, marine habitats, and water quality. Our current educational programs consist of: - Student camps that provide hands-on exploration of coastal wetlands, beach and barrier islands, birding, and fisheries, - Academic field-trips designed to familiarize students with the plants, animals, habitats, and processes of marine and aquatic environments tailored to the visiting age group, - Teacher Workshops provide teachers with opportunities to expand their knowledge of coastal issues and provide a venue for teachers to earn continuing education units (CEUs) or college credit, and - College field courses that expose students to applied marine science and marine mammal and sea turtle rescue and rehabilitation. IMMS seeks to continue and enhance current educational and outreach programs while actively engaging in development of new programs to educate the public. These include: - Ecotours to provide unique, hands-on field experiences - Technology labs to introduce students to modern research techniques - Exhibit enhancements for our public Discovery Room facility - Outreach capabilities for community festivals and events Investing in public education regarding marine conservation issues will contribute to ultimate goal of a restored and healthy Gulf of Mexico for generations to come. IMMS is committed to fostering a sense of appreciation and stewardship for the great coastal and marine resources in Mississippi and the Gulf of Mexico for those young and young at heart.	Hancock Harrison, Jackson	Yes	No	No	Yes	No	No	Yes	15	No		$ 3,000,000.00	$ -	
	Research and Education	47	10/23/2013	Linear Park on Beach Boulevard	The concept is to engage leading landscape architecture firms to establish a master plan to transition the Mississippi Gulf Coast's 26-mile man-made beach into a flourishing linear park along the Gulf of Mexico. A linear park that will be a touted haven for tourist, significantly enhance the Gulf Coast environmentally and provide the state of Mississippi with a preeminent eco-tourism destination. Linear Park on Beach Boulevard perfectly complements the region's tourism landscape. Perhaps more importantly, the Mississippi Gulf Coast will see a transformation from a "budget beach" to a transcendent park nestled between scenic Beach Boulevard and the Gulf of Mexico - a truly unique and premier landing-place developed with the environment, tourism and storm preparedness in mind.	Harrison	Yes	No	No	Yes	Yes	Yes	No		Yes		$ 100,000.00	$ -	
	Research and Education	52	10/24/2013	Graveline Bay Preserve Land Acquisition	The following is from the Department of Marine Resources web site: http://www.dmr.ms.gov/joomla16/index.php/mississippi-gems/215-graveline-bay Coastal Zone Management Mississippi Department of Marine Resources Mississippi GEMS Graveline Bay Preserve DetailsCategory: Mississippi GEMS 1.Graveline BaySite Information Point(s) of Contact: Mississippi Department of Marine Resources, Coastal Preserves Program 2.Geographic Information: The land is located between Ocean Springs and Gautier along the Mississippi Gulf Coast.1.Narrative Description of the Site: The wetland boundary of this 2,339-acre preserve is Graveline Bay and Bayou. One exception is the exclusion of one major tributary. Graveline Bay and Bayou represents one of few relatively undisturbed estuarine bays and small tidal creeks in Mississippi. The area supports salt marsh, brackish marsh, and several oyster beds. The bay, marsh, adjoining upland forest, and undeveloped beach front near the mouth of Graveline Bayou are an important landing area for neotropical migrant birds. This coastal bay/marsh estuarine system receives only local freshwater runoff and consists largely of mid-level needle rush (Juncus roemerianus) dominated marsh along its entire length. Smooth cordgrass (Spartina alterniflora) occurs largely as narrow (1-3 m) bands along the creeks and bayous. 2.Date When Information Last Updated: March, 1998 3.Location: Jackson County, N30 E 21'''47" W88 E 41'''41" 4.Area of Influence: Watershed 3.Ecological/Cultural Characteristics1.Habitat type: The following ecological communities are expected or known to occur: Estuarine subtidal 1) muddy sand embayment 2) small tidal creek 3) mollusk reef; Estuarine intertidal 1) sand beach 2) mesohaline marsh 3) oligohaline marsh. 2.Rare/Endangered Species:1.Malaclemys terrapin Diamondback Terrapin 2.Juniperus silicicola Southern Red Cedar	Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	
	Research and Education	77	10/27/2013	Wildlife Rehabilitation Center	The proposed project has four major components: 1. Land acquisition 2. Construction 3. Management & Administration of WCRC main mission 4. Education Land acquisition will involve locating and purchasing 5 to 30 acres with a bias toward Western Jackson County or Eastern Harrison County and also for properties which have at least power, water and sewer service on site. Further preference will be towards parcels with standing homes and or barns to reduce construction expenses. Smaller parcels within this size range may be favored to reduce continuing expenses. A donated parcel of land in the interim would eliminate this component of the project and the proposal would continue with the remaining points. Construction involves the renovation of any existing structures or the building of a suitable clinic space, a learning annex, and a separate protected rehabilitation space for animals in recovery. Animal enclosures of various characteristics and size would be needed. The largest of these would be an eagle flight cage built to the size and material regulations set by US Fish and Wildlife. It would be the only one of its kind in the state and, contingent upon occupancy, be available to house eagles in need from all parts of Mississippi. The main mission of WCRC is to rescue, rehabilitate and release injured and orphaned wildlife while educating our community on wildlife and our environment. This portion of the award would cover operational and administrative expenses such as taxes, insurance, and other scheduled recurring costs. Fundraising efforts would continue and help support the more daily expenses such as animal food and veterinary care currently encountered. To further this mission, we propose a full-time paid director and a volunteer coordinator be funded for the term of this project. They would administer the grant and the execution of the project under direction of our Board of Directors and fulfill the time-intensive roles indicated by their titles. The proposed educational component of this project will increase the number of public education programs provided by WCRC and increase the level of training for our volunteers. This will be accomplished by enrolling volunteers in state, regional and national conferences and symposia. This will enhance their ability to care for the wildlife and to conduct additional educational programs locally.	n/a	Yes	No	No	No	No	No	Yes		No		$ 1,368,000.00	$ -	

	Research and Education	88	10/29/2013	Mississippi Habitat Stewards Program	Summary: Mississippi Wildlife Federation requests consideration of funding to continue growth and success of Mississippi Habitat Stewards Program along our Gulf Coast, assuring a team of trained volunteers to provide services to natural area managers, especially those related to public use, access and interpretation. Habitat Stewards also provide an engaged citizenry to support greater public support of natural areas management and restoration. Background: In July 2010, in response to the Deep Water Horizon explosion and the anticipated arrival of oil along Mississippiâ€™s shoreline, the National and Mississippi Wildlife Federations launched a volunteer surveillance network. This network of volunteers across the coast was established to monitor sections of shoreline and document their findings. By late summer, it became evident that damages from the BP oil spill would be dramatically different from those experienced after the Exxon Valdez disaster. However, many of the volunteers were still anxious to provide meaningful efforts on behalf of the coastal wildlife and their habitats. With this request in mind and with a clear understanding of the needs of natural lands managers on the Coast, Mississippi Wildlife Federation received grants from Shell Oil and BP in 2011 to develop a one-of-a-kind program for volunteers to be trained in coastal habitats and management of natural areas, named Mississippi Habitat Stewards. After completing the training, mentors introduce the new Habitat Stewards to natural lands managers to match volunteers with certain skills and partners with corresponding needs. The success rate of the program depends on the continued mentoring and landowner needs assessments by Mississippi Wildlife Federation. Currently, 38 students have completed the 24 hour training program. From 2011-2013, Mississippi Habitat Stewards have completed over 4,100 hours of volunteer service for natural land management tasks at many partner locations across the coast including: -Mississippi Coastal Preserves (managed by Department of Marine Resources) -Conservation parks owned and managed by Land Trust for the Mississippi Coastal Plain -Mississippi Sandhill Crane National Wildlife Refuge -Grand Bay National Wildlife Refuges -Walking Trails at USM Marine Education Centerâ€™s Cedar Point site -Trails at Shepherd State Park Wildlife Tourism, Natural Resource Management & Coastal Restoration: Because much of the work of the Mississippi Habitat Stewards is related to public use issues on natural lands in south Mississippi, there is a distinct overlap for ecotourism markets. Habitat Stewards are keeping natural area locations clean, safe and interpreted for all visitors, including eco-tourists. Mississippi Wildlife Federationâ€™s request for the Mississippi Habitat Stewards Program provides important capacity to continue the success of the program as well as filling a much needed void for	George, Harrison, Jackson, St. Tammany, Stone, Hancock, Pearl River, Mobile	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,175,855.00	$ 600,000.00	
	Research and Education	89	10/29/2013	Gulf Coast Prescribed Fire Cooperative	Thousands of acres of private and public longleaf pine forests, savannas and coastal marshes within the three coastal counties are in need of management activities including prescribed burning and exotic plant control to restore habitats of native wildlife and plants and also to increase values of privately-owned forest lands for recreational use and forest products. This program will establish an organization of professional fire practitioners to apply fire as a science based management tool on private and public wildlands adjacent to or in close proximity to established core conservation areas. All burn teams will be trained to National Wildfire Coordinating Group (NWCG) standards. Each team includes the following staffing and equipment: type-2 prescribed fire burn boss; type-3 tractor plow or tracked engine with operator, one type-6 engine with engine boss and three type-1 firefighters. Based on funding, a maximum of three teams will be established. Teams may work independently or in conjunction with each other or with established fire crews from local, state and federal agencies to apply prescribed fire on approved public and private lands. Team members will be available to make presentations concerning the benefits of prescribed fire to school and civic groups and to provide fire management training to local landowners and firefighters. When not engaged with prescribed fire-related activity, teams will engage with other land management needs: monitoring results of prescribed fire projects; conducting fuel reduction and invasive species control; monitoring, mapping and maintaining public access and nature trails; and prescribed fire education projects. Teams will be supervised by a Field Coordinator (professional fire manager) who will oversee safety, training, work assignments, planning and coordinating with local partners and cooperators.	Hancock Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	No		Yes		$ 25,120,000.00	$ -	
	Research and Education	95	10/31/2013	Point Clear Island restoration/preservation and coastal access project	The Point Clear Island project is a former DMR approved mitigation site for a casino project which was never built. As the owner of the island and adjacent mainland lot I have sought partners from the City of Gautier, Land Trust and Conservation Fund to acquire and implement the restoration and construct tne pile supported island walkways and Graveline Bayou overlook. Land acquisition and construction is estimated to be less than $490,000. It would be good to name the project the Jean Baptiste Boudreaux de Graveline Island walk in honor of one of the earliest coast settlers.	Jackson	Yes	No	No	Yes	No	Yes	Yes	62	No		$ 490,000.00	$ -	
	Research and Education	96	10/31/2013	Pass Christian - East Harbor Expansion Improvements/Enhancements	The City of Pass Christian is currently constructing a harbor that is funded via CDBG (economic development - must create 50 jobs in 3 years), CIAP grant and BP block grant. The 22+ acre harbor basin, dredged to 10 ft. depth, includes 164 recreational and commercial boat slips, 96 truck/trailer parking slips, 215 automobile parking slips, 4 tractor/trailer slips, 4 publicly accessed boat ramps, landscaping, water/sewer and electrical infrastructure and 2 public restroom facilities. An elevated access structure along the east breakwater perimeter allows public access for fishing and will serve as base of operations for commercial seafood operations. Additional items include signage denoting protected and endangered species and public information regarding invasive aquatic species and how to prevent spreading. The design includes approximately 240 recreational and commercial slips but approximately 75 slips were bid as alternates due to funding constraints. Additional items designed and bid as alternates are a splash pad/spray park, pier for commercial operations related to shrimp off-loading, additional public restrooms and improvements to existing harbor area serving commercial operations. Additional items to consider funding include public laundry facilities for transient boaters and handrails along southwest breakwater that will allow public access. The project is designed to meet clean marina program criteria. Construction completion at 10/31/13 is approximately 50%.	Harrison	Yes	Yes	No	Yes	Yes	No	Yes		Yes	commerci	$ 3,500,000.00	$ -	
	Research and Education	97	10/31/2013	Cedar Lake Acquisition	Approximately 14 waterfront acres with a potential interpretive center could be acquired. The property is located at Cedar Lake adjacent to the Tchoutacabouffa River. Approximately 2 acres are on Cedar Lake Island with the remainder on the mainland. The property connects with approximately 45 acres of preserved Land Trust property.	Harrison	Yes	No	No	Yes	No	Yes	Yes	20	No		$ 890,000.00	$ -	
	Research and Education	103	11/12/2013	Southern Mississippi Applied Restoration Toolkit (SMART): Coastal restoration vulnerability assessment and prediction	Barrier Islands and marshes serve as buffer zones and filters between the Gulf of Mexico and mainland human population centers and infrastructure, protecting these communities from the most devastating impacts of oil spills. Mississippi (MS) barriers and marshes themselves are also some of the most popular tourist and recreational destinations along the Gulf Coast. Furthermore, they support diverse mico-, mieo-, and macrofaunal communities and provide a wide range of ecosystem services. Over historic time, the MS barrier islands and marshes are eroding rapidly primarily due to a combination of accelerated relative sea-level rise, hurricane impacts, and anthropogenic influences coupled with a marked decrease in sediment delivered to the coast. These factors are expected to have a continued widespread impact for the coming decades along the MS coast. Therefore, our vulnerability to future oil spills might be increasing significantly, not to mention additional adverse effects associated with loss of these coastal environments. Numerous coastal restoration projects in the state of MS have been proposed to meet the RESTORE program goals. For example, some of these efforts aim to restore hydrology patterns, dune fields, marshes, vegetation, barrier islands, and forests covering 10â€™s of thousands of acres. These will truly be large efforts, and highlight the importance of these environments towards mitigating future risk. However, in order to fully remedy harm and reduce risk to the MS Gulf Coast natural resources, a detailed understanding of the balance between sediment supply, sea-level changes, and hurricane impacts is of crucial importance. Without this, many of these projects could potentially see short-lived success. This information could thus be used to better plan these restoration efforts, and make them more successful in the long-term, in addition to understanding current and future vulnerability.	Hancock Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 4,905,000.00	$ -	
	Research and Education	1146	10/7/2011	Biloxi River	(ORIGINAL ID#11393) Palmer Creek and Biloxi River are the west boundary of the parcel that is adjacent to the Desoto National Forest on its southeast and north boundary. Conservation of the parcel would preserve natural springs flowing into the Biloxi River that flows into Back Bay on the Mississippi Coast.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 750,000.00	$ -	
	Research and Education	1152	11/9/2011	BSL Municipal Harbor Improvements	(ORIGINAL ID#11459) This project consists of improvements to the BSL Harbor located at 100 Jody Compretta Drive, near Downtown. Proposed projects consist of: 1. The City proposes to construct Pier 5 inside the BSL Harbor. The project consists of permitting and coordination with regulatory agencies, design, bidding and construction of a new 10' wide timber pier with concrete piling associated water and electrical utilities and lighting. The BSL Harbor has proven to be an economic driver for Hancock County and BSL since it's opening in 2013 and boasts one of the highest occupancy rates of all harbors on the MS Coast. The proposed Pier 5 project will add approximately 18 65' wet slips and approximately 25 35'-40' wet slips. These slip sizes represent the size range in most demand, all current slips in this size range are leased to long term slip holders. 2. Planning and preparing a maintenance dredging plan for BSL Harbor dredging and for removal of approximately 60,000 CY of material from the BSL Harbor basin. The planning stage will consist of hydro graphic surveying of all canals and the harbor basin to determine the amount of material which needs to be dredged and utilized for marsh restoration. 3. Bay St. Louis proposes to extend the existing Day Pier which is located adjacent to the Rutherford Pier at the Municipal Harbor. The Day Pier is used daily to dock local transient vessels which frequent the nearby downtown establishments. The current pier is approximately 200 LF in length can not support the amount of vessels which frequent the area. The extension would add an additional 400 LF of docking space and enhance and support local and regional tourism efforts.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 4,300,000.00	$ -	
	Research and Education	1156	9/26/2011	Point Cadet Preliminary Planning	(ORIGINAL ID#11200) Point Cadet is the last green space on the Gulf Coast open to the public. Point Cadet was the Mississippi hub for BP, PLC's clean up operations following the oil spill. This project presents a unique opportunity to enhance the environmental quality of life along the Gulf of Mexico and improve the area for any future emergency response. Point Cadet has long had the support of the State of Mississippi and is eligible for funding from the Mississippi Public Trust Tidelands Fund. Completion of the project would merge Biloxi's fishing heritage, commercial and recreational marine access, and Gulf of Mexico education opportunities into one location open to the public. The improvement of Point Cadet would also enhance preparedness for any future Gulf catastrophe by expanding existing staging areas. While the project has the full support of the State of Mississippi, additional funding in the amount of $10,800,000 is needed to complete this project. The Tulane Regional Urban Design Center (TRUDC) and 16 Architecture students have been working with the City of Biloxi throughout the spring to create a new vision for Point Cadet, a public waterfront park in East Biloxi. The Point serves as a highly visible gateway to the city, and is the last waterfront green space open to the public. The TRUDC is responsible for accommodating the new Seafood Industry Museum along with a marina expansion, small retail locations, covered open spaces for festivals and farmer's markets, a children's park, open green space, and other public amenities. On March 30, TRUDC leaders and students presented their preliminary designs to the public. The meeting allowed students to both share their work and encourage members of the public to describe what they would like to see at the Point. The group has worked closely with Biloxi Mayor A.J. Holloway and other city officials, and will tailor their proposals to incorporate what they have learned from the public and the administration. A consolidated plan that draws from the students' individual work was created following the public meeting. The TRUDC has worked with H3 Architects to incorporate the Seafood Industry Museum design, created a working budget to aid the city in fundraising and allocation, and provided plans and renderings broken down into budgeted phases for clarity and ease of implementation.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 10,800,000.00	$ -	
	Research and Education	1157	9/26/2011	Bayou Auguste Environmental Enhancement and Wetlands Project	(ORIGINAL ID#11193) Bayou Auguste Environmental Enhancement Project is designed to protect and enhance Bayou Auguste. In the aftermath of the oil spill, BP affirmatively acted to protect this delicate area from harm therefore both parties have recognized the environmental importance of this body of water. The goal of the project is conservation and restoration of the waterway to it natural function as a tidally influenced water body. A secondary benefit is enhancement of public awareness of the Bayou's environmental importance via a trail along its banks. The total project funding sought from BP, PLC would be $685,000. The City of Biloxi has been working with the Gulf Coast Community Design Studio (GCCDS), Biloxi Housing Authority, Biloxi Public Schools, and the Land Trust for the Mississippi Coastal Plains in their effort to enhance and restore Bayou Auguste. The goal of this work is to conserve and restore Bayou Auguste to its natural function as a tidally influenced water body, and to enhance public access to the Bayou through the means of a trail along the banks. Water quality not only in the bayou but also in Back Bay will be improved by restoring the bayou's effectiveness as a natural filtration system for stormwater runoff and will enhance the ecosystem of the bayou to support marine and wildlife habitat, wetland restoration and public access. This project will include removal of riprap along the banks, removal of the Old Bayview Ave Bridge and re-grading of the Bayou banks to remove sedimentation thereby returning the Bayou to a more natural flow which will increase stormwater retention capacity. In these areas of riprap removal and re-grading, marsh restoration will also occur which will include the removal of invasive plant species to be replaced with native wetland plants. This will improve the natural ecosystem and provide for improved stormwater runoff pollution removal capabilities which will result in better water quality in the bayou and Back Bay. An educational walking trail will be installed along both the North and South sides of the bayou to provide safer public access to the bayou. This trail will include boardwalks, walking trails, observation platforms and signage identifying native plant and animal species. The trail will begin upstream along the bayou and will end at Back Bay Blvd. This will help to increase the public awareness of and appreciation of the Coast's natural resources such as wetland plant and animal species unique to the bayou ecosystem.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 685,000.00	$ -	
	Research and Education	1158	7/8/2013	Tchoutacabouffa Nature Area/Blueway & Greeway	(ORIGINAL ID#12019) 2) The Tchouticabouffa River Blueway/Greenway is an exciting project that addresses the unique riverine resources that start in the upper reaches of Harrison County and drains some 75 square miles of watershed that eventually enters Back Bay and then the open waters of the Ms Sound. The City has acquired CIAP and Tidelands funds to make limited investments in procuring sensitive lands for conservation purposes. The Tchoutacabouffa River watershed has been studied by the MDEQ as part of the Coastal Independent Streams Basin. At present, the City and the Land Trust for the Ms Coastal Plain have partnered to expend CIAP funds to purchase stream side properties in association with the proposed Riverside Park tract, just north of Lamey Bridge Road. Now is the time to acquire available properties along various parts of the river for conservation and public access purposes. BP funds of $3.5 M are requested to purchase property yet developed to further protect the water quality of this waterway leading to the fragile fisheries nursery downstream	Harrison	Yes	No	No	No	No	Yes	Yes	10	No		$ 3,500,000.00	$ 400,000.00	

	Research and Education	1159	6/9/2011	Ocean Expo Learning Center - A World Class Aquarium	(ORIGINAL ID#10101) The Institute or Marine Mammal Studies will construct a 175,000 square foot Ocean Expo Aquarium Complex on 11.5 acres at the southwest quadrant of the intersection of Interstate 10 and Interstate 1-110 in D'Iberville, Mississippi. Ocean Expo will be a public educational and tourist destination that will support and accommodate the following education programs: Place emphasis on dolphins and other marine mammals, both in the wild and in captivity, provide students and the general public with an opportunity to learn about nature and marine life, and combine elements of aquatic displays, presentations, and unique interactive exhibits that will make learning fun. The Ocean Expo will be an internationally recognized institution promoting education, conservation and research while providing recreation to people of all ages. The facility will replace Marine Life Oceanarium, the well known landmark that was destroyed by Hurricane Katrina. This project will be a major economic development project that will create a family destination attraction. This plan as the "Gateway to the Gulf" will beautify the area and increase tourism while providing educational and interactive learning experiences. The Institute of Marine Mammal Studies (IMMS) is a non-profit organization established in 1984 for the purpose of public education, conservation and research of marine mammals in the wild and under human care. The Center for Marine Education and Research provides a place for IMMS to fulfill its mission and share its work with the public. The IMMS is a stranding network participant that currently holds a USDA/APHIS Exhibitor's License. The Ocean Expo will continue this purpose through its stranding and rehabilitation services. The City of D'Iberville has partnered with Dr. Moby Solangi's Ocean Expo Aquarium project. In this partnership, the City has been presented with a great opportunity, but also significant challenges regarding the financial investment made by the City. The foremost of these challenges is the acquisition of land and necessary infrastructure improvements. The City is requesting approximately $10,000,000 from BP for land acquisition and pertinent infrastructure improvements. The Ocean Expo will enhance marine education and environmental stewardship; we can truly discover the wonders of the Gulf.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 12,000,000.00	$ 2,000,000.00	
	Research and Education	1160	7/8/2013	Ocean Expo	(ORIGINAL ID#12023) Co-Venturing with Ocean Expo/IMMS a future phase of the Ocean Expo Aquarium and learning/Marine Education Center to help build out this one- of- a- kind coast attraction. This project will replace the landmark Marine Life Oceanarium, which was one of the most popular family attractions on the Mississippi Gulf Coast prior to Katrina. Funds will be used to provide infrastructure support such as a salt water pipeline, additional land, roadways, parking, and enhancement of exhibits $10.0-M. This project is consistent with at least four (4) of the eight (8) eligible requirements of the Restore Act and GoCoast 2020. . $10.0-M	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 10,000,000.00	$ 4,000,000.00	
	Research and Education	1161	7/8/2013	Brodie Bayou Reclamation/D'Iberville Waste Water Treatment Facility Adaptive Reuse	(ORIGINAL ID#12022) The Brodie Bayou Reclamation/Public Access is a unique project that seeks to convert the old D'Iberville waste treatment plant ($4.5M) to support the collection and transmission of saltwater to the Ocean Expo project at the Interstate. Also, plans envision acquisition of adjoing shoreline and wetland areas to allow public access to Back Bay. Approximately 12 acres ($3.0M) is needed to join with 17 acres of city owned land. This adaptive re-use project provides new public access to a very special shoreline area known as Brodie Bayou. Wetlands reclamation and enhancement in this bayou will provide immediate benefits for the ecology and public access to these once off-limits shorelines. This would create a new bay front park on the west side of the I-110 where no such facilities currently exist. Adaptive reuse of the facility to support Ocean Expo is both creative and an efficient use of city property and facilities.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 7,500,000.00	$ -	
	Research and Education	1162	7/8/2013	French Market Conference Facility	(ORIGINAL ID#12021) The French Market Conference Facility is a major component of the city?s post Katrina recovery plan for the redevelopment of the downtown area. The availability of public land (14 acres) at the former D'Iberville middle school site would form the core assemblage along with other city owned property. This location now houses the Town Green/Historical Center and will soon be home to the first phase of the CTA Transit Center. This location is one block from the City's waterfront and together with the proposed commercial seafood harbor, D'Iberville hopes to complete the multi-faceted restoration of the downtown. Roads and utilities have been upgraded throughout this area to support major growth in the downtown to coincide with planned casinos south of Racetrack Road. The centerpiece of the French market is a meeting facility with attached hotel and decked parking to grow the conferencing portion of the tourism trade that compliments gaming and overall tourism development. An asset of this type will help diversify our economy and act as a catalyst for rebuilding this area. A 20,000 square foot meeting facility scaled to meet the city?s modest needs is expected to cost $12 million. The City would secure a private hotel developer/operator to co-manage the combined facility.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ -	$ -	
	Research and Education	1163	7/8/2013	Fountain Beach Public Access and Wetlands Restoration	(ORIGINAL ID#12020) The Fountain Beach Public Access and Wetlands Restoration is another waterfront restoration project that seeks to expand the available acreage for public access to the shoreline. The unique wetland areas and near shore waters associated with Fountain Beach would be restored and enhanced. The City has invested local and Tidelands funds over the last decade to make Fountain Beach a popular bay front park for the public use. New public fishing piers would be constructed in an already popular public facility. Approximately 4 acres is needed to expand the current footprint along the Bay. With improvements and amenities, the project is estimated to cost $4.0M.	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 4,000,000.00	$ 200,000.00	
	Research and Education	1165	11/7/2011	Fountain Beach Environmental Enhancements & Public Access	(ORIGINAL ID#11433) This project seeks to undertake restoration and enhancement activities for on site tidal wetland areas, repair erosion of the shoreline, and improve public access through repairing and extending the existing fishing pier.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 300,000.00	$ 25,000.00	
	Research and Education	1166	11/7/2011	Bayshore Wetlands Restoration	(ORIGINAL ID#11432) The scope of the project seeks to restore a small tidal wetland area in the downtown waterfront area in D'Iberville, Mississippi.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 400,000.00	$ 50,000.00	
	Research and Education	1172	6/13/2013	Graveline Bayou Restoration Project	(ORIGINAL ID#606) Graveline Bayou is located in the southwest corner of the City of Gautier. The bayou is an intricate network of waterways that contain marsh habitats, deeper water habitats, and adjacent coastal habitat for native wildlife. The bayou empties into the Mississippi Sound which is a part of the Gulf of Mexico. Historically, the bayou provided direct easy accessibility to the Gulf of Mexico for commercial and recreational fishermen, as well as sailing, kayaking, and ecological viewing. This allowed commercial fishermen to anchor their boats at their residences, saving harbor fees & slip rental, transportation fees, etc., thereby reducing product costs to the consumer. Due to deterioration of the bayou, accessibility has been severely compromised or completely blocked, and the natural habitats have changed in character. What was once a thriving ecological, commercial, and recreational hub has been reduced to residences with a water view, without the benefit of the Gulf access. The main factors contributing to the deterioration of the bayou: 1. Sediment accumulation at the mouth of the bayou due to sediment transport westward by the prevailing southeast wind, and the associated wave action, has eliminated the ability of most passenger boats and commercial vessels to navigate out of the bayou to the open Gulf. 2. Erosion of upstream drainage channels due to bank erosion is continuously depositing sediment into the upper reaches of the bayou, which then travels further downstream during subsequent rain events, filling in the channel and reducing the allowable depth for navigation. 3. The closure of the mouth of the bayou during the Deepwater Horizon Oil Spill Crisis compounded the sediment accumulation problem removing any agitation of the bayous by boat traffic which may re-suspend and flush out the newly deposited sediment. Boat traffic was greatly diminished on Graveline Bayou in the spring and summer of 2010 because of the fear that oil in the bayou from the blowout could damage engines. As a result, this shallow bayou did not receive the normal bottom sediment scouring associated with boat traffic and the subsequent flushing with the tidal cycle. Now that the bayou depth is less than three feet, scouring is still minimal because boats can no longer navigate the bayou. During an average tidal cycle, approximately 40% of Graveline Bayou is flushed and replaced. This would include any re-suspended sediment present in the water. 4. The depth of Graveline Bayou presents a flood hazard. Following Hurricane Katrina, the bayou began silting in more rapidly than in preceding years. This problem was further exacerbated by the Deepwater Horizon incident. Now, the bayou is so shallow it no longer affords protection to shoreline properties from flooding. In order to restore the bayou, the siltation needs to be removed from the bayou and the area adjacent to the mouth, to restore the bayou and outlet depths. Any compromised banks need to be stabilized and protection measures need to be implemented to prevent re-siltation. The U.S. Army Corps of Engineers has informed the City that they will conduct a study of Graveline Bayou that will include wave action study, jetty need and location, erosion issues and resolution, marsh restoration, flooding concerns, soil migration, etc.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes	100	No		$ 7,200,000.00	$ -	
	Research and Education	1173	9/26/2011	Dantzler Street Bridge Elevation	(ORIGINAL ID#11209) The Pascagoula River Audubon Center is being relocated to downtown Moss Point. The Dantzler Street Bridge needs to be elevated three feet to accommodate this relocation and the tour boats and to compliment the waterfront walkway proposed for areas around Pelican Landing and Beardslee Lake and from McInnis Avenue to Elder Street. The bridge and bridge approaches will need to be raised as will existing city utility lines.	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 651,000.00	$ -	
	Research and Education	1176	9/26/2011	USM Marine Education Center at Cedar Point	(ORIGINAL ID#11197) This project consists of a University of Southern Mississippi Marine Education Center at Cedar Point ($2 million; complete building, walking trail to Davis Bayou on Cedar Point).	Jackson	Yes	No	No	Yes	No	No	Yes		No		$ 2,000,000.00	$ -	
	Research and Education	1178	8/19/2011	Environmental Impact Assessment at Gulf Island National Seashore for Bike Lanes	(ORIGINAL ID#860) This project consists of an Environmental Impact Assessment at the Gulf Island National Seashore for bike lanes ($60,000; for conducting a NEPA assessment to place safe bike routes along major arteries within Gulf Islands National Seashore - a National Park Service facility - to connect Highway 90 to the Mississippi Sound, Park Visitor Center, bayous, and picnic areas). Construction of lanes and elevated walkways through the forest is estimated at $1.5 million and would include interpretive plaques with a description of the wildlife and fauna found in the park.	Jackson	Yes	No	No	Yes	No	No	Yes		No		$ 1,560,000.00	$ -	
	Research and Education	1183	8/19/2011	Front Beach Sand Replenishment / Extension to create 'Living Shoreline'	(ORIGINAL ID#855) Front Beach Living Shoreline and Upstream Improvements to Increase Resilience. Employ a Living Shoreline approach to approach to reduce erosion on Front Beach while mitigating upstream flooding. Replace failing drainage outfalls into the MS Sound with strategy to mitigate the flow of water from upstream, while replacing traditional concrete pipe culverts at the Mississippi Sound with a strategy that combines traditional drainage with a "Living Shoreline" that distributes water flow through aquatic plantings and structures, trapping and accruing sediment to minimize erosion. The City received a MS/AL Sea Grant award that allowed them to develop a preliminary engineering and landscape design and cost estimate. The project relates to the Army Corps of Engineers Mississippi Coastal Improvement Program (MSCIP). This project is ready to develop bid specifications and construction is estimated at $4 million.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 4,000,000.00	$ 32,000.00	
	Research and Education	1189	11/9/2011	Round Island Lighthouse	(ORIGINAL ID#11447) This project consists of the restoration and rebuilding of the Round Island Lighthouse. A park including a visitor's center and parking for public access would be constructed surrounding the newly restored lighthouse. Project funds would include the acquisition of the land around the lighthouse as well as work to prepare, improve, and restore the lighthouse and the site.	Jackson	Yes	No	No	Yes	No	No	Yes	30	Yes		$ 9,619,000.00	$ 1,500,000.00	
	Research and Education	1190	11/9/2011	Point Park	(ORIGINAL ID#11450) This project consists of the design, engineering, and construction for the development of Point Park. This currently undeveloped site was used by BP during cleanup operations. This includes demolition of existing structures, deteriorated piers, and concrete areas and the development of drainage, flood control, and erosion prevention structures and water and sewer infrastructure. Improvements would be made to roads, walkways, boardwalks, and parking areas as well as existing piers, wharfs, boat ramps, and pavilions. New boardwalks, fishing and birding amenities, and a restroom would be added at the site. An amphitheater and playground would be constructed to improve entertainment and recreational resources. Included would be landscaping, benches, tables, BBQ units, and trash receptacles.	Jackson	Yes	No	No	Yes	No	No	Yes	90	Yes		$ 15,990,250.00	$ 1,000,000.00	
	Research and Education	1191	11/9/2011	Lowry Island Marina	(ORIGINAL ID#11449) This project would assist with the redevelopment of the Lowry Island Marina. An interpretive boardwalk would be constructed with appropriate width and length to accommodate various recreational uses and pedestrians and to allow for better access from various points of Lowry Island. Included would be landscaping, directional signs, benches, tables, BBQ units, trash receptacles, as well as lighting for the boardwalks, parking areas, and educational signs. An amphitheater for entertainment, functions, and public gatherings would be constructed as well as pavilions with restrooms and storage. Berthing areas for nature trousism boats and kayak launching facilities will be added. A wall would be placed along the river for fishing, picnics, and viewing. Harbor improvements would provide water, sewer, fuel, and power for boat slips, lighting of piers and walkways, and construction of a multi-level dry dock structure. The road to the northern tip of the island would be enhanced for better access to the existing businesses.	Jackson	Yes	No	No	Yes	No	No	Yes	90	Yes		$ 12,312,848.00	$ 3,601,000.00	
	Research and Education	1193	12/8/2012	B.B. Jennings Park Ecological and Wetlands Education Center & Blueway Connection	(ORIGINAL ID#11861) Pascagoula is pursuing a citywide revitalization strategy to reconnect neighborhoods to their waterfronts on bayous and wetlands, the Pascagoula River, and the Mississippi Sound. In its Parks Master Plan, the City identified B.B. Jennings Park in a historic, low-income neighborhood as an opportunity for residents to gain an understanding of the region's complex hydrology and ecology. The Mississippi Department of Marine Resources chose the park as a demonstration project for its Coastal Smart Growth Initiative and provided funding for conceptual redesign. Planned activities at B.B. Jennings Park include: 1. A citywide nature education center where visitors and local school children will be introduced to the region's plants, animals and ecosystem processes. 2. The stabilization and restoration of a natural streambed via marsh and wetland habitat plantings and erosion prevention measures. 3. New green infrastructure to include a nature trail, green parking and stormwater management best practices. These projects will demonstrate the use of these water quality strategies to the public and encourage wider use. 4. Connections from Pascagoula's Complete Streets bicycle and trail network to the Park's interpretive nature trails. 5. Property acquisition to expand habitat and visitor capacity. 6. Creation of a Pascagoula River Blueway connection from B.B. Jennings Park to the Pascagoula River. Environmental benefits include marsh and wetland restoration in the Pascagoula River watershed, which suffers from numerous water quality impairments. The bayou flowing through this park is part of a larger system that traverses marshland and drains from Krebs Lake into the Pascagoula River. The demonstration of best stormwater management practices and acquisition of adjoining undeveloped parcels will produce measurable water quality benefits onsite and in the region. Reducing stormwater pollution will improve water quality for fish and wildlife and support economic development through the area's growing eco-tourism industry. Increased amenities also serve Pascagoula's economic development goal of retaining professionals, who cite local quality of life as a key reason for relocation. Mississippi ranks highest in the nation in obesity, and community benefits to the project include expanded recreational opportunities for physical fitness through hiking, jogging and boating.	Jackson	Yes	No	No	Yes	No	Yes	Yes	70	Yes		$ 2,781,250.00	$ 50,000.00	
	Research and Education	1195	9/5/2012	North Jackson Marsh Restoration/Enhancement	(ORIGINAL ID#11791) Historically, this area has provided many critical functions to the marsh ecosystem and City of Waveland. As a transitional estuarine/freshwater wetland the area: 1) provides the marsh with fresh water; 2) collects, holds and treats much of the City?s storm water runoff; 3) provides a natural refuge for estuarine species; and 4) is the heart of natural corridors for plants, amphibians, reptiles and birds. Alteration and development has seriously derogated the area?s ability to provide these functions. A nonstructural restoration/enhancement of the area can play a key role in the City?s recently approved Hazard Mitigation Project. As proposed here a multifaceted approach will be used to restore/enhance the area by: 1) removing accumulated debris and sediment, 2) remove invasive plant species, 3) restore, expand and enhance the area?s various wetland habitats, and 4) incorporate minor stream bank enhancements to the area between the pond and northern limits of Jackson marsh. Enhancement/restoration activities will include selective (hack and squirt) herbicide applications to remove invasive species, grubbing, sediment and debri removal. Once grubbing and sediment/debris removal activities have been completed, native wetlands species will be planted and monitored within the site. A restrictive covenant/conservation easement will be placed on the property to prevent any adverse impacts to the property once restored. The City of Waveland has an existing contract with the Pickering Firm, inc. which will allow them to provide the environmental, engineering and other professional services needed for the project. The area will function as a city recreational park area with an emphasis on nature.	Hancock	Yes	No	No	No	No	Yes	Yes		No		$ 380,000.00	$ -	

	Research and Education	1196	6/23/2011	Hancock County Shoreline Stabilization and Oyster Restoration	(ORIGINAL ID#325) Coastal Environments, Inc and partners propose to fabricate and install bio-induced oyster reefs to stabilize shorelines and help restore and sustain valuable and sensitive estuarine ecosystems along coastal SW Hancock County, Mississippi. This project will stabilize up to +/- 12 miles of shoreline by restoring intertidal oyster reef habitat using a cost-efficient and effective vertical breakwater technology called ReefBlk. The ReefBlk units function as a substrate for oyster spat attachment and allow growth of an intertidal oyster reef that provides both shoreline protection and habitat for estuarine organisms. As oyster growth progresses and the reef unit becomes more dense, the bioengineered structure dampens and dissipates wave energy and protects the estuarine marsh from erosion. These proven living shoreline and erosion control methods are currently inducing the growth of bioengineered and self-sustainable living oyster reefs that expand both linearly and vertically to buffer wave action and retard erosion along estuarine shorelines in Texas, Louisiana, Alabama and Florida. High vertical profile oyster reefs also enhance species habitat diversity and provide oyster larvae for recruitment to adjacent pubic oyster grounds, thus increasing an area?s economic value as related to commercial and recreational fishing, oyster harvesting and ecotourism. Based on historical aerial photography that can be verified for the lower Hancock County area we can deduce these data: - 12 miles of ReefBLK protection (63,360 linear feet/12,672 individual ReefBLK units) in this area to restore an average of +/- 43.64 acres of marsh (+/- 3.66 acres per mile) and provide protection to +/- 5,900 acres of existing marsh. In the project are: - Linear erosion rates average from 275 ? 750 feet since 1958. Average 5.3 ? 14.5 feet per year since over that period. - Average erosional rates range from 50 ? 250 acres since 1958. Average 1 acre to 4.8 acres per year. - Some areas as much as 1,150 and 1,450 linear feet of coastline erosion in the 52 year period (specifically on the eastern facing shore of Point Clear). Average 22 ? 28 linear feet per year. CEI proposes to design, fabricate and install a patented artificial oyster reef system, ReefBlk along the shorelines of SW Hancock County, Mississippi.The overall goals of thee project include reef construction, shoreline stabilization, marsh regrowth, faunal utilization, and seagrass colonization.	Hancock	Yes	No	No	No	No	Yes	No		No		$ 12,000,000.00	$ -	
	Research and Education	1197	6/22/2011	Mississippi Gulf Coast Oyster Shell Recycling	(ORIGINAL ID#227) The objective of this project is to develop a cost effective program on the Mississippi Gulf Coast to recycle oyster shell from consumers (restaurants, shucking houses, oyster fisherman, individuals who purchase oysters by the sack, etc.) that can then be used to restore and enhance shellfish habitat destroyed or damaged as a result of the Deepwater BP Oil Spill. An effective program will require educating consumers on the importance of recycling and encouraging their participation in a program that recycles oyster shell for use in replenishing natural oyster beds and stabilizing shorelines. Suitable substrate is critical to developing a viable reef, and the substrate material (cultch) preferred by oyster larvae is oyster shell. Since the early 1900?s, agencies of the various Gulf states have been depositing cultch material, mainly native shell, on public oyster grounds to build and enhance reefs. Currently a significant amount of the shell produced by consumers is deposited in landfills. Because much more shell is removed from public oyster grounds than is returned for habitat development and enhancement, the Gulf of Mexico is experiencing a shell deficit. This project is designed to reduce that deficit by recycling shell that would otherwise end up in landfills. The additional recycled shell will then be available for current or future oyster reef and shoreline restoration projects. Developing a cost-effective program to recycle shell for use in reef-building will be crucial to coastal restoration projects in the Gulf of Mexico. Similar programs have already produced positive results in Chesapeake Bay as well as in coastal areas of North Carolina, South Carolina, New Hampshire, and Texas. The project proposed here will use information from those state programs to develop an effective program for recovering oyster shell produced by Mississippi Gulf Coast consumers.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 800,000.00	$ -	
	Research and Education	1198	8/25/2011	The Development of The Advanced Real Time GNSS and Physical Atmosphere and Ocean Observing System within the Gulf of Mexico	(ORIGINAL ID#923) The Development of The Advanced Real Time GNSS and Physical Atmosphere and Ocean Observing System within the Gulf of Mexico Conrad Blucher Institute for Surveying and Science Texas A&M University-Corpus Christi & University Corporation for Atmospheric Research Boulder, CO & Center for Space Research University of Texas at Austin Introduction: The ability to observe our environment in real time significantly increases our capacity to anticipate and respond to changing conditions that may increase the risk of injury and property damage. The installation of a network of instrumentation clusters is proposed for the Gulf of Mexico. The primary instrument of each cluster will be a geodetic quality Global Navigation Satellite System (GNSS) receiver. Observations derived from this network will promote research on ocean-atmosphere interactions; hurricane intensity forecasting; sea level and coastal subsidence monitoring; and storm surge modeling. Each of these topics was given high priority in a recent survey of the oil and gas industry operating in the Gulf . It is anticipated that equipment can be deployed on both fixed and floating platforms, significantly improving the observational capability of the region. The deployment of this instrumentation on offshore platforms would allow these research topics to be addressed and combined in a unified measurement system throughout the Gulf region. Advances in GNSS analysis techniques now enable the continuous positioning of mobile instrumentation to less than a few centimeters. The precision of this measurement can be used for continuous monitoring of sea surface height, tides, and wave motion. The addition of both temperature thermistor strings and underwater acoustic instrumentation provides a link to sea surface temperatures and ocean bathymetry. These same analysis techniques are able to measure the delay of GNSS signals as they pass through the atmosphere. This delay can then be related to the integral of atm ospheric water vapor. This establishes a link between the sea surface temperatures and the latent heat in the atmosphere that contributes to hurricane intensity changes. The recent environmental disaster following the sinking of the Deepwater Horizon offshore drilling rig has highlighted the need for more ocean observing systems to better measure the physical processes occurring in the Gulf of Mexico. Scientific measurements in this harsh offshore environment are difficult to obtain and cannot be undertaken without access to the large number of offshore platforms owned and operated by the offshore industry. This white paper proposes a partnership between the private offshore industry and the scientific community to collect critical physical data to enhance our knowledge of the atmospheric and oceanographic processes that drive the forces that interrupt our ability to manage the vast economic and natural resources of the Gulf of Mexico. Figure 1: Proposed GNSS network in Gulf of Mexico (yellow). Existing GNSS stations used to estimate PW (precipitable water vapor) are shown in black and red. A collaborative research group, consisting of academic and governmental researchers, has expressed interest in the establishment of this Gulf network. The members of the group have diverse expertise and research interests, ensuring that there would be broad application of these data if available. Scientific Applications A report by the American Geophysical Union (AGU) after the 2005 hurricane season summarized some of the fundamental research and observational capability that is relevant to the Gulf . Topics that were addressed in this report include hurricane intensity forecasting, storm surge modeling, and subsidence monitoring. A short synopsis is provided on how each of these topics would benefit from this network. Atmospheric interactions and hurricane intensity forecasting: GNSS observations can be analyzed to provide integrated precipitable water vapor (PW) es timates of the atmosphere. These measurements provide continuous monitoring of atmospheric PW and are insensitive to rain and clouds. PW estimates are now routinely being used at NOAA to improve precipitation forecasts in the continental U.S. Estimates of PW within the Gulf would provide a strong link between ocean temperatures and atmospheric water vapor. An illustration of this is shown in Figure 2 for data collected on the island of St. Maarten in the Caribbean. This figure shows the PW estimates obtained from a GNSS station on the island and the sea surface temperature (SST) around the island. It is clear from this comparison that the two fields are highly correlated. This implies that the local SST in the region has a significant influence on the total column water vapor, not just surface humidity just above the surface. Figure 2: Time series of daily PW values (blue) and sea-surface temperature (red) for the region round St. Maarten. Assimilation studies for two specific hurricanes, Dean in 2007 and Gustav in 2008, have been extensively studied. Both show a positive improvement in the forecast of minimum surface pressure with the three-dimensional variation assimilation of PW into the Weather Research and Forecasting (WRF)	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 16,000,000.00	$ -	
	Research and Education	1200	10/15/2012	FishSmart: Building Sustainability in the Snapper and Grouper Recreational Fisheries and Associated Industry in the Gulf of Mexico	(ORIGINAL ID#11834) Justification: The Deepwater Horizon Oil Spill substantially impacted recreational fisheries and their supporting industry in the Gulf of Mexico. Responses to a questionnaire following the spill indicated that nearly all surveyed fishing equipment retailers experienced reductions in their monthly sales, with the majority reporting losses of greater than 50%. Bookings for charter fishing trips and other associated recreational businesses plummeted. Even though some fish stocks such as red snapper are now showing signs of rebounding, NOAA Fisheries noted that as the population grows and the fish get bigger, recreational fishermen are likely to catch their quota faster, resulting in even shorter fishing seasons. This will translate into reduced recreational fishing trips, further reductions in tackle and equipment sales, fewer bookings for charter business, and generally lower economic viability for many recreational fishery-related businesses still trying to recover from the oil spill. Mandatory catch and release due to regulations will result in a slower stock rebuilding process and be a continuing drag on the recreational industry if anglers are not engaged to adopt Best Practices (tools and techniques to avoid catching fish that must be released combined with tools and techniques to improve the survival of recreationally caught and released fish). Objective: To increase angler adoption of Best Practices thereby advancing the sustainability of fish stocks and potentially extending fishing opportunities, anglers must be aware of practices that have proven successful. In four Gulf states alone (Florida, Louisiana, Mississippi, and Alabama) anglers released more than 4 million snappers (1.5 million of these red snapper) in 2011. Using conventional release techniques, between 15% and 40% of released red snapper do not survive, depending on depth at which they were caught, water temperature, and other factors. Increasing the survival of these by a few percent will result in a tremendous conservation benefit to fish stocks and eventually increase sustainable fishing opportunities and economic benefits from recreational fishing. From 2008-2013, anglers were required by Federal fisheries authorities to use release devices and to vent fish (remove gases from the fishes body to enable it to return to habitat depth on its own) that they release in an effort to improve survival. However, findings of the ?2012 FishSmart Workshop on Improving the Survival of Released Fish concluded that use of recompression (returning a fish to depth without invasive procedures involved with venting) may be equally effective in improving the survival of released fish. Whether venting or recompressing, it is imperative that anglers are knowledgeable of the best scientifically-based information and implement Best Practices that minimize interaction with the fish that must be released and maximize the survival of those fish that are caught and released. This is not only a sound conservation practice, it is also good for business since reductions in mortality will eventually be reflected in longer seasons and/or larger bag limits that provide more angling opportunities. However, increasing survival is dependent on educating the anglers who interact with and handle the fish. Approach: The project will consist of four primary aspects to educate anglers to implement Best Practices, measure results, and potentially increase fishing seasons and the economic returns to coastal communities: 1) A survey of anglers in the Gulf states to develop a baseline for awareness of Best Practices. To accomplish this, 8-10 focus groups will be conducted across the Gulf states to assess the knowledge of and attitudes toward Best Practices. These focus groups will allow baseline information to be gathered on responses of anglers to test messages in each region of the Gulf community. Following this, a telephone survey to anglers will be conducted to ascertain the general knowledge across the regional angler base before the multi-media campaign is initiated. 2) A 3-year multi-media awareness/education campaign to inform anglers of the need for implementing Best Practices and drive them to online information sources. The TV/Radio and Digital Media communications will be conducted in segmented markets of Alabama, western Florida, Louisiana, Mississippi, and Texas coordinated through the Recreational Boating and Fishing Foundation (RBFF). RBFF was established for the sole purpose of communicating messages to anglers to affect behavior and fishing participation rates. 3) Development and delivery of online content on Best Practices and gear. Information gained from the 2012 FishSmart Gulf of Mexico/South Atlantic workshop on Best Practices and messaging will provide the basis for a communications and media campaign. This information will be assembled into on-line delivery mechanisms for anglers. 4) Effectiveness Evaluation: A follow up survey of anglers in the Gulf states to determine effectiveness of and response to the multi-media awareness campaign and online education material. Cost: Approximately $20 - $20.5 million ($15 million of this for creative ad campaign development, media buys, and ad placements within each of the 5 states). Expected Results:	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		Yes		$ 20,000,000.00	$ -	
	Research and Education	1206	4/25/2012	Introduction and Evaluation of New Designs of Propellers and Nozzles in the Gulf Shrimp Fishery for Enhanced Efficiency and Fuel Economy	(ORIGINAL ID#11680) A combination of increased operating expenses and reduced ex-vessel prices for catch has created a perfect storm of economic hardship in the Gulf Shrimp Fishery. The fishing industry has worked to reduce costs of operation, but unfortunately, few new avenues for this exist. One major cost to the shrimp industry is fuel and there are potential avenues to reduce fuel consumption aboard vessels. One of these is improved propellers and nozzles for propulsion. A recent collaborative evaluation aboard one vessel by Texas A&M Sea Grant researchers and a shrimp company showed that fuel consumption was reduced by approximately 28% when replacing a traditional Kaplan propeller with a Rice Speed Propeller and match Speed Nozzle. These results closely resembled that of a similar study performed in Australia where 25% fuel savings was achieved. An older study showed a 5% reduction in fuel by changing only a Kaplan style propeller with a skewed propeller design without modification of the propeller nozzle. The scope of this project will involve rigging out several collaborating vessels throughout the Gulf of Mexico with new designs of propellers and nozzles (different from the traditional Kort nozzle). Evaluations of fuel savings potential during actual fishing conditions will be performed utilizing fuel flow meters. As many offshore trawlers are now encountering fuel bills of over $200,000 per year, demonstrations with this new technology could provide significant savings to the industry and contribute to our nation's goal to reduce fuel consumption. The results of this project will be shared with the fishing industry throughout the Gulf through printed reports, local workshops, and through direct contact with industry.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	No	No		No		$ 750,000.00	$ -	
	Research and Education	1207	4/25/2012	Development and Distribution of Gear Technology to Improve Fuel Economy and Reduce Bycatch in the Gulf Shrimp Fishery	(ORIGINAL ID#11678) The offshore shrimp trawl fishery accounts for a significant portion of landings in the Gulf of Mexico. Due to a multitude of events (i.e. hurricanes, oil spill, imports), the fishery has seen a substantial decline in fishing effort while operating costs have continuously risen. With increasing fuel prices, fuel saving technologies are a logical avenue to assist in reducing operating expenses. A paucity of information exists documenting the effect of gear technologies on fuel consumption. Cambered trawl doors are currently being utilized by some fishermen in the southeastern United States. These trawl doors have evolved significantly over the past decades, but until recently have not received much attention in the southern shrimp fishery. Evaluations of these doors have yielded promising potential to reduce fuel consumption in the shrimp fishery. Several door sizes have been evaluated, but cambered trawl doors, 50% smaller than the traditional wood or aluminum doors, are documented to have fuel savings of 25-30% during actual fishing conditions. Additionally, bycatch reduction remains a high priority issue in the southeast. Reducing incidental bycatch has been shown to improve catch quality and reduce fuel consumption. We propose to conduct a series of experiments aimed at documenting the fuel savings achieved by cambered trawl doors and continue to improve the bycatch reduction capability already in use in the fishery. More specifically we aim to: 1) Evaluate cambered door gear technology within the southeastern shrimp trawl fishery; 2) Continue to elicit industry participation in evaluating more complex bycatch reduction devices (BRDs); and 3) Conduct result demonstration and dissemination activities of the newly documented gear (doors & BRDs) to shrimp fishermen throughout the southeast to increase the acceptance and use of these gears. Through years of experience, we have found that informal meetings are an optimal forum for information dissemination; providing less volatility from industry and allowing for an effective one-on-one exchange of ideas. As such, we will convene a series of informal meetings throughout the southeastern US to disseminate the results of this study. By continuing our research and development efforts to reduce bycatch within the shrimp trawl fisheries, commercial fishermen will become actively involved in BRD research and development and will be more accepting of those devices tested.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,500,000.00	$ -	

	Research and Education	1208	6/22/2011	Saving the Gulf Coast one bale at a time.	Our process is a larger scale version of what is being used in construction areas along our roadsides throughout the United States. Small square hay bales are used in construction sites to prevent soil runoff. Our process uses large 4' X 5' round bales of hay that weigh approximately 800-1000 lbs each, to form a barrier along shorelines and marsh edges that are in need of protection from erosive wave energy. The barriers will wick/trap sediment and ultimately contribute to the creation of "new" soil. This forms a more natural buffer against erosive waves when compared to rocks, concrete, or metal structures that are traditionally used for erosion control. An advantage of using a 4-5 ft. soft natural barrier is the bales serve more effectively by raising the height level for natural absorption. The bales act as a natural sponge that absorbs the water to help dry out and stabilize the soil. Hay is used in many situations for erosion control with the use of blankets/mats, spraying of chopped hay and as mentioned, small square bales. Using a large round bale is a completely new approach that has never been applied. 50' barriers will be placed along the shoreline in need of protection from erosive wave energy. When the waves approach the shore, the hay filters and traps the captured sediment. Over time the sediment build up forms a solid barrier to protect eroding shores and bank lines that will revegetate over time or purposely plant with desired vegetative species. Bales can also be injected with selective seeds or plugged with native plant seedlings to stimulate vegetaton growth. Consider the size and weight of the hay bales that are used to build the barriers. There is a double row of bales 50' long. This becomes a 80,000 lb. wall, 50' long by 10' wide by 5' tall. Immediately, the hay begins to absorb water and silt and weighs even more. Eventually what you have is a natural levy/ridge. The collection of silt in the tightly rolled hay that forms the bale creates "mud" to keep the straw together and prevent the hay from disintegrating. Construction and Installation Construction and installation is streamlined. Very little material and equipment are needed for this process. * Hay * 2 work boats * Jig * Forklift * Treated post (size determined per job site) * Work crews/laborers * 1 utility airboat (pile driver) * Wire/rope Hay will be transported to a central location/dock where the hay will be linked with the wire/rope. Sections will be floated by boat to the restoration location where posts have been driven in the marsh bottom.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 250,000.00	$ -	
	Research and Education	1209	7/12/2013	Emergence, persistence, dynamics, and consequences of White Spot Syndrome Virus in a salt marsh edge crustacean community after the DWH event	(ORIGINAL ID#12029) This project seeks to elucidate the causes and consequences of the emergence and persistence of the non-indigenous white spot syndrome virus (WSSV) in a community of 8 decapod crustaceans in salt marsh edge habitat in the northern Gulf of Mexico (NGOM) following the DWH event. WSSV is a severe pathogen of salt marsh crustaceans, including fiddler crabs, mud crabs, grass shrimp, blue crabs, and penaeid shrimp. WSSV has increased in prevalence since the DWH event and the consequences for the salt marsh crustacean community are significant. WSSV emergence in the MS salt marsh community parallels the emergence of VHS virus in Pacific Herring following the Exxon Valdez event in Prince William Sound. The project will use a combined field, population genetic, molecular phylogeographic, experimental, and modeling approach to address hypotheses concerning the emergence, persistence, dynamics, prevalence, and consequences of WSSV in the communitv..	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 4,000,000.00	$ -	
	Research and Education	1210	1/1/1900	Replacement for R/V Tom McIlwain	(ORIGINAL ID#191) Funds for the purchase of a replacement research vessel for the Gulf Coast Research Laboratory.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	Yes		No		$ -	$ -	
	Research and Education	1211	6/29/2011	GCRL: Marine Education Center	(ORIGINAL ID#400) The University of Southern Miss through its Gulf Coast Research Laboratory is preparing for the development of a $20 million state-of-the-art Marine Education Center on the University's Cedar Point Teaching Site in Jackson County, Mississippi. Before the loss of its J.L. Scott Marine Education Center during Hurricane Katrina, the Gulf Coast Research Laboratory established a long and rich history of providing quality marine education to students, visitors and coastal residents of all ages. Building upon these traditions, this proposed new replacement marine education and outreach center will be the model for connecting people to the Gulf of Mexico, its resources and attributes while providing an understanding of how they impact our daily lives. The proposed GCRL: Marine Education Center will include 36,000 square feet of live animal exhibits, hands-on activities, classrooms and laboratories into its ongoing education programs. The Cedar Point location will provide extensive opportunities for outdoor environmental education and recreation The Center is a professional learning community whose programs reflect current coastal science research conducted within the Gulf of Mexico. The Center provides an understanding of both the role the Gulf of Mexico plays in our daily lives and how a science based understanding of the fundamental issues of ecosystem health; resiliency and restoration will allow us to develop policies and frameworks necessary to sustain a healthy Gulf. The Center and its educational program's will provide the public with access to ongoing research efforts in order to achieve a better understanding of data collection, analysis and interpretation as well as the role of science and scientific knowledge in making decisions on the management of the Gulf of Mexico's post Deepwater Horizon spill recovery efforts. Since the beginning of the Deepwater Horizon oil spill residents living along the Gulf of Mexico coastline, as well as the United States populatio n as a whole, have been seeking accurate and specific information regarding the spill's environmental impacts within the Gulf of Mexico's vast and diverse environmental community. The public's understanding of the environmental issues surrounding the event, the dynamics of the Gulf of Mexico's ecosystems and the impacts upon our coastal populations is lacking in depth, clarity and relevance. In order for the public to understand these issues, the public has to understand the biological processes surrounding how these components interact with both the physical environments and the plant and animal communities that inhabit them. This lack of understanding of the biological processes and the scientific procedures used to determine the impacts on those processes undermines the public's ability to effectively respond to impacts of the event. The Center will address these and other relevant issues through a series of dynamic exhibits and educational programs illustrating the public value and applicability of the University's ongoing research at the Gulf Coast Research Laboratory. The facility and its programs will increase visitors' understanding of how coastal sciences and research enhance the quality of their lives, promotes sustainability of coastal resources and how individuals can use this knowledge to make responsible decisions concerning coastal resources.	Jackson	Yes	No	No	No	No	No	Yes	100	No		$ 18,500,000.00	$ 11,500,000.00	
	Research and Education	1212	10/24/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11412) GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental well being of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON); - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland-Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fis h varies among species. This necessitates the collaborative involvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -	
	Research and Education	1214	7/18/2011	Gulf of Mexico Community-based Restoration Partnership	(ORIGINAL ID#635) The Gulf of Mexico Community-based Restoration Partnership (GCRP) is a regional multi-year partnership that was established in 2001 between the NOAA Community-based Restoration Program (CRP), the EPA Gulf of Mexico Program Gulf Ecological Management Sites (GEMS) Program, and the Gulf of Mexico Foundation. The purpose of the partnership is to strengthen conservation efforts by supporting on-the-ground projects to restore coastal marine habitats, benefit living marine resources, and foster local stewardship of the sites. This successful collaboration will help to expand restoration of habitats that are critical to the sustainability ofnatural resources in the Gulf of Mexico, and to continue to expand public education and outreach efforts to broaden participation in restoration activities, further developing a conservation ethic at the community level. To date, the GCRP has funded 76 community-based restoration projects. These projects occurred in a number of habitat types. In total more than $3 million has been funded by the Gulf of Mexico Foundation towards these restoration projects, of which an additional $5.5 million has been leveraged in matching contributions from project partners. This match includes nearly 50,000 contributed volunteer hours. In total, more than 15,000 acres of coastal habitat have been restored as part of these partnership projects. A multi-agency steering committee works effectively to guide the partnership in soliciting and developing projects, reviewing and selecting projects for funding, ensuring required permits and assurances are acquired, and monitoring project progress and compliance. There is a broad diversity of groups involved in the partnership projects, including school children and other community volunteers, universities, nonprofit groups, business and industry, and coastal planning organizations, such as NEPs and NERRs. Collaboration between the partners, many of which have their own public outreach programs to link w ith the GCRP, will result in long-term stewardship of the restored resources and help generate a community conservation ethic. The GMF will lead further development of the GCRP in a manner that best addresses a regional approach to restore coastal marine habitats and benefit the natural resources of the Gulf of Mexico. Our goal is to take action towards reversing the downward trend in habitat loss and increase the attention on the growing need to preserve and protect America's Gulf Coast.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,500,000.00	$ 500,000.00	
	Research and Education	1219	3/27/2012	GSMFC Cooperative Regional Monitoring Project	(ORIGINAL ID#11656) When the BP drilling rig Deepwater Horizon exploded approximately 50 miles southeast of the mouth of the Mississippi River on April 20, 2010, it caused significant damage to the waters of the Gulf of Mexico. In order to effectively assess the long-term effects of this event, there needs to be a coordinated regional approach in monitoring the status and health of the marine resources in the Gulf of Mexico. The Gulf States Marine Fisheries Commission (GSMFC) is uniquely poised to provide such an approach. Established by both state and federal statutes in July 1949, the GSMFC is an organization of the five states (Texas, Louisiana, Mississippi, Alabama, and Florida) whose coastal waters are the Gulf of Mexico. It has as its principal objective the conservation, development, and full utilization of the fishery resources of the Gulf of Mexico to provide food, employment, income, and recreation to the people of the United States. One of the most important functions of the GSMFC is to serve as a forum for the discussion of various challenges and programs of marine resources management, industry, research, etc. and to develop a coordinated approach among state and federal partners to address those issues for the betterment of the resource for all who are concerned. The GSMFC has a long history of successfully coordinating and administering cooperative, regional programs such as the Southeast Area Monitoring and Assessment Program (SEAMAP), Interjurisdictional Fisheries Program (IJF), Sportfish Restoration Program (SFRP), Fisheries Information Network (FIN), Economics Program (EP) and the Marketing, Traceability and Sustainability components of the Oil Disaster Recovery Program (ODRP). One of the reasons the GSMFC has been so successful is that it is a vertically-integrated organization that provides products and services that satisfy a common need to both its state and federal partners throughout the Gulf of Mexico. In addition, the GSMFC has sole-source authority, under the Magnuson Fishery Conservation and Management Act, Title IV, Sec 402(d), which will expedite the distribution of funds and quickly allow these important activities to commence. Outlined below are the various activities, by GSMFC program, that can be accomplished if the requested funding is provided. It is important to note that these activities will augment the existing long-term work (totaling $5,530,000) already being conducted and funded through the GSMFC. The total annual cost for all of the proposed GSMFC activities is $2,418,000. The duration of this proposed project is 10 years. With inflationary increases over a ten-year time period, the total cost of this project is $27,578,000. The attached PDF provides specific program details.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		No		$ 27,578,000.00	$ 5,530,000.00	
	Research and Education	1229	9/7/2011	Rebuild Veterans Avenue Pier	(ORIGINAL ID#1066) The Veterans Avenue Pier was damaged by Hurricane Katrina. Prior to Hurricane Katrina, this pier had been a major beach amenity. The pier will be re-constructed and will be approximately 700' long. The damage to the pier was mainly destruction of the superstructure. The support structure is basically in tact, but may need some repair/replacement. The superstructure of the pier will be timber and will be approximately 20' wide. The water bottom around the pier will be enhanced to attract more aquatic life through constructing an artificial reef, planting aquatic veeetation and other habitat enhancements.	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	1233	9/7/2011	Enhance Aquatic Habitat around Existing Piers	(ORIGINAL ID#1065) There are 7 piers located along the 26 mile stretch of sand beaches in Harrison County, MS. These piers provide recreational opportunities for the residents and tourists. They are also a location where people can enjoy the view of the MS Sound and the adjacent Barrier Islands. In order to attract aquatic life - crabs, fish, etc., it is proposed to plant sea grasses and provide artificial reefs around each pier. The piers are: Porter Avenue and Coliseum Park - Biloxi Ken Combs Pier, Uric Pier, Moses Pier, and West End Pier - Gulfport Jim Simpson Pier - Long Beach	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 1,750,000.00	$ -	

	Research and Education	1238	9/21/2011	Habitat Restoration and WQ Management in the Mallini Bayou System	(ORIGINAL ID#11158) The Mallini Bayou System consists of 5.71 miles of 12 inter-connected channels located on the eastern side of Bay St. Louis immediately west of the City of Pass Christian, MS. Harrison County proposes to improve and mange the water quality in the Mallini Bayou System of channels for the purpose of eliminating stagnation and hypoxia; reducing nutrient concentrations and coliform counts; and aiding compliance with the TMDL. The NRDA project involves the installation of a pipeline to pump high-quality bay water into Bayou Boisdore during ebb tide periods; remove obstructions; and dredge channels to the original permitted design depth. The pump station will be located about 5,750 ft from the north inlet of Mallini Bayou and about 5,505 ft from the south inlet at Anchor Basin; pumped bay water will flow equal distances north and south. Aeration devices are to be positioned in key channel intersections to facilitate water circulation. The goals are to prevent fish kills and improve larval survival rates so the Mallini Bayou System is restored to a functional estuary and contributes to the NRDA restoration efforts for the greater Gulf of Mexico ecosystem. Gannett Fleming, a global engineering company with over 95 years of experience, has been selected as the design-build firm for this project. Project tasks will include hydrodynamic modeling to the Mallini Bayou System, geotechnical analysis of the pipeline pathway, property acquisition, design engineering, permitting, contracting, construction oversight and commissioning/start-up. The company will operate the installed facilities for 20-years and provide environmental monitoring and reporting for verification of environmental offset credits during the anticipated Deepwater Horizon Spill 20-year loss period of the deep sea floor habitat. Following completion of design engineering an operating reserve account is to be established by NRDA and managed by Harrison County Government.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 20,000,000.00	$ -	
	Research and Education	1246	9/26/2011	Sediment and Tar Ball Transport Study	(ORIGINAL ID#11180) The Jackson County Board of Supervisors (JCBOS) is interested in completing a study designed to evaluate the oil spill impacts on a local level and with a focus on sediment transport with respect to movement of tar balls and contaminants along the beaches and into the bays and estuaries along the Jackson County coastline. Study of this area of the Gulf Coast is important especially since Jackson County plays a major role in the Mississippi Coastal Improvements Program Comprehensive Plan Elements as home to the Pascagoula River, the Dantzler Coastal Preserve, the Franklin Creek Floodway, Bayou Casotte, and others. Salt marshes and wetlands occupy the lowest elevations in Jackson County, especially in the coastal area and along the lower reaches of the Pascagoula River System. Sediments are commonly organically rich silts, clays and to a lesser extent sands. Salt marshes and wetlands are dynamic environments that are continually changing due to natural processes and human activities. They are currently recognized as an important and productive ecosystem that filters surface water, serves as habitat for wildlife, provides storage for floodwater, and affords recreational opportunities. The Study goals and objectives would be to: 1) identify areas of the Jackson County coastline where oil or tar balls remain, this task will facilitate further clean up of the coastal areas of the county, 2) identify areas of the Jackson County coastline where habitat may be degraded due to the presence of oil or tar balls. This task will aid in development of any needed habitat restoration programs, 3) identify areas of the Jackson County coastline where sediment is eroding or accreting, this will aid in understanding the sediment transport regime and prediction of where contaminants may be transported to in the event of another oil spill or other hazardous event, 4) identify areas of the Jackson County coastline where renourishment may be needed; where armoring may be a reasonable alternative as a means of erosion control; or where a living shoreline may be a viable choice for habitat restoration and erosion control, 5) identify areas of the Jackson County coastline where water quality may be degraded due to the oil spill or due to other causes, this will aid in long term restoration efforts and support other water quality improvement programs. The Study will be divided into the following tasks: 1) data collection, 2) data evaluation, 3) report preparation and recommendations.	Jackson	Yes	No	No	No	No	No	No		No		$ 303,000.00	$ -	
	Research and Education	1254	11/22/2013	Marinovich plan to restore the gulf shrimp	Shrimp migrate in from the gulf three times a year.Research need to be done to establish when the shrimp move into the estuaries. On this bases the adult shrimp needs protecting when they move up out of the gulf to spawn. As a net maker I see this happen three times a year. Letting the shrimp spawn correctly will increase the juvenile release from the estuaries.(Letting the eggs, larvae juvenile and adult shrimp come safety into the estuaries without being caught by the shrimp trawls.) When we have maximum spawn we will have maximum juvenile release when the conditions are correct in the estuaries. This will help the ecology (example, more shrimp to feed fish etc.). Over time the shrimp population will increase and there will be more food for the whole ecology. After the migration is established then the law must be fixed in order to protect the shrimp from the nets when they are spawning. This involves changing the opening and closing of the shrimping season. The Marinovich Plan was researched twenty years ago and the shrimpers about 80 percent agreed to it. The Marinovich Plan has the dates when the shrimp spawn because it happen every year; but it has to be proven to the scientific community. Thank you for opportunity to make this proposal. Let work together to save the food for the gulf ecology.	Harrison, Jackson	Yes	Yes	Yes	No	Yes	Yes	No		Yes		$ -	$ -	
	Research and Education	1255	12/3/2013	Gulf Observing Aerial Program	A diverse constellation of airships, airplanes, and UAVs should be put in place to provide long endurance observation of the Gulf. The primary purpose of the aerial fleet will be to closely monitor the offshore drilling community to immediately detect any oil spills, washed ashore oil deposits, or environmental damage to sea life, coastal marshes, etc. Additional functions of the aerial observing system would include maintaining cellular communications service during and after hurricanes, helping find disabled boats, tracking contraband vessels and airplanes, and other functions/capabilities of benefit to the public. MAC proposes to assemble a team of subcontractors that will provide the aerial platforms, provide maintenance and mission support, and operate from the Stennis International Airport, in Hancock County, Mississippi. MAC is proposing a "Mississippi Centric" team that will include the Mississippi Divisions of Lockheed Martin, Stark Aerospace, Northrop Grumman, Aurora Aerospace, Nvision, Optech, and others. MAC will prepare the overall plan, have constructed one of the world's largest hangars, procure the necessary aerial platforms and ground support equipment, and operate the system for the first seven years, at which time the MDEQ will call for proposals for an operational contractor for the second seven year period.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No	Yes		Yes		$ 360,000,000.00	$ -	
	Research and Education	1256	12/3/2013	Develop blue crab aquaculture in Mississippi	The consortium's goal is to expand on existing knowledge of blue crab aquaculture to develop new resources to bring greater economic prosperity to Mississippi and is primarily focused on the soft crab fishery. The main goals of the consortium include3 the following:(1) support expansion of blue crab hatchery capacity to increase seed availability and decrease cost of production,(2)identify small and limited resource farmers and/or fishermen interested in blue crab pond culture,(3)establish a center for development and technical assistance to serve as a resource to participants, and(4)evaluate economic feasibility. We believe this project will have positive economic benefits and are currently seeking opportunities for funding.	Hancock, Harrison, Jackson	Yes	Yes	Yes	No	No	No	No		Yes		$ -	$ -	
	Research and Education	1259	12/3/2013	Ocean Springs YMCA Expansion/Renovation Plan	The Mississippi Gulf Coast YMCA located in Ocean Springs and Tradition serves the entire Gulf Coast region with our facilities and outreach programs. The 7,000+ members between our two branches have access to fitness equipment, group exercise classes, recreational and fitness activities in the pool, child watch, social and family activities, wellness programs, and corporate membership benefits. We are able to extend our reach to promote healthy communities through our after-school programs, career engagement programs, evidence-based chronic disease prevention programs, and water safety programs. The Mississippi Gulf Coast YMCA serves over 10,000 participants annually with 5,000 of those being under the age of 18. In the last 5 years, the Mississippi Gulf Coast YMCA has provided over $500,000 in free and subsidized programs to youth, families, and seniors seeking health and community. In order to have a greater impact to families and businesses on the Gulf Coast, the Mississippi Gulf Coast YMCA is proposing the renovation of the Herbert Wilson Community Center in Gulfport into a new facility. With this additional facility, the YMCA would be able to offer a family-based fitness facility convenient to residents and businesses in the area. (This would allow us tackle the health and social needs that affect the area including diabetes, hypertension, youth obesity, and arthritis with our chronic disease prevention programs, youth engagement, and after-school and camp programs.) The facility would benefit our employees through our corporate membership benefits program to provide employee wellness through membership at the Y. We assist employees and their families in managing their total health and well being through a variety of services such as adult and childrenâ€™s land and water-based fitness classes, reduced programming fees and other family-oriented activities and special events. In the 2017 County Health Rankings, Harrison County is ranked 24th while neighboring counties, Jackson and Hancock, are ranked 8th and 6th respectively. A local YMCA provides access to exercise opportunities, chronic disease prevention programs, youth programs, and social opportunities â€" all areas that can improve the overall social and physical health of residents thus, improving the local health ranking. A new facility will not only serve Gulfport and Harrison County but will impact the quality of life in all surrounding areas including all 7 coastal counties in our service area. Having an additional facility can increase the number of these programs by increasing awareness of the programs to individuals, schools, and employers. Gulfport is a centrally located area along the coast that also brings coastal residents who may not reside there to the area for work. These outreach programs include programs to improve physical and social health as well as youth development. The following is a list outlining the current health statistics among residents, according to the Behavioral Risk Factor Surveillance Survey: -Â21% of residents are overweight with 37% of those being obese, -Â14% have diabetes and an additional 29% are at risk, -Â35% have hypertension, and -Â30% are considered sedentary in Health District XI which includes the coastal counties. The Mississippi Gulf Coast YMCA offers programs that can address all of these health issues as well as better our workforce and increase safety in water which is a large part of our culture. The Evidence-Based Health Initiatives offered at the YMCA currently include the Diabetesâ€™s Prevention Program, Healthy Weight and Your Child, and EnhanceÂ® Fitness. These programs are geared to meet the health needs of Gulf Coast residents through methods proven to increase activity and reduce weight. The Diabetes Prevention Program targets the 29% of adults over 18 who are at risk	Jackson	Yes	No	No	Yes	Yes	No	Yes		No		$ -	$ -	
	Research and Education	1260	10/1/2014	Natural Resource Enterprises - Restoring Coastal Habitats and Economies along the Mississippi Gulf Coast	Conduct a series of 6 educational workshops training coastal landowners, sports fishing guides, commercial fishers, resource agency and economic development professionals, and community leaders along the MS Gulf Coast in natural resource enterprise development and associated land & water conservation practices. We will partner with agency and organizational partners, including but not limited to MS Department of Environmental Quality, MS Department of Marine Resources, Gulf Coast Research Laboratory, MSU Coastal Extension Service, Audubon Society, and local boards of supervisors and city officials to host these training events. We will train interested landowners, sports fishing guides, and commercial fishers to develop a diversity of outdoor adventure excursions drawing outdoor enthusiasts to the Mississippi Gulf Coast. Through development of these new businesses and associated conservation, we will improve the environmental health of coastal lands, wetlands, watersheds, estuaries, and the Mississippi Sound on the MS Gulf Coast.	Hancock, Harrison, Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ 165,094.00	$ -	
	Research and Education	1261	12/4/2013	Mississippi Gulf Coast Arboretum Trail -- Coastal Arboretums for Restore Canopy and Reduce Injury	The MS Urban Forest Council is a 30 year old nonprofit organization that works with community leadership and citizen to establish healthy tree canopies. We have the only arboretum program in the state and have been certifying arboretums in Ms for over 10 years. This project addresses community resilience, injury, restoring canopies, economic development, tourism benefits and much more. This project has two phases. Phase I of developing arboretums along the MS Gulf Coast will include 3 arboretum, one per county. The project is to scale, landscape level,easily managed, no land acquisition and shovel ready. We can have trees in the ground as early as six months after approval. This project will fully develop local public green spaces into arborvitae creating a network of linear green spaces. This project has multiple benefits - Community resilience, job training, eco-tourism, economic development, recreation, social and ecological benefits, water quality and storm mitigation, and other benefits. This project will be phase one on creating quality green spaces in the three coastal counties. Three sites (one per county) will be created another 10-20 existing sites will be identified and certified as arboretums. Phase II will include developing an arboretum for every coastal city, (12) sites. In all, a total of 15 arboretums developed and another 15 existing sites that can qualify as an arboretum will be certified. So when the project is complete there will be a minimum of 30 certified arboretums along the coast that can be linked as green way, tourism and promotion of communities and other sites. The arboretum will be included on a GPS system so that citizens and visitors can visit and view these sites. These sites will be highly visible. The value of related water quality functions will be determined for these sites based on i-Tree formulas. The project has four basic components. 1. The key objective is to establish healthy Ms Gulf Coast Arboretae in every city in the 3 counties of the Mississippi Gulf Coast; Harrison, Hancock and Jackson. 2. MUFC already has an established and working network of communities on the Ms Gulf Coast through the Scenic Communities and Tree City USA programs. We will work in partnership with local communities, other organizations and counties to plant perpetual green spaces, and provide management training, job training, and all resources to create sustainable green spaces. There are identified spaces on the coast that will remain forever green. Identified by the Gulf Legacy Inventory and the proposed urban tree canopy inventory. We will combine our efforts with other restore projects to add the urban forestry element. We will provide training and other skills, develop a long term inventory of trees, replant the right tree in the right place, address storm preparedness and ensure long term green infrastructure and healthy tree canopies. 3. We will work with each entity. responsible for these green spaces to develop a series of strategies/activities including massive tree planting. Currently, we have 15 Tree City USA on the MS coast. These partner communities will be included in our project. We will provide resources, training and strategies working with local communities, provide advanced long term training on tree maintenance and use of tree inventories to better manage trees and identify important environmental and social values for existing and new trees and community forests. The project will do all these activities through partnerships with local city/county to build knowledge, resilience, create citizen involvement, develop interactive conservation activities and ownership. Communities will learn community resilience aspects and connecting to a healthy gulf based on their actions within their own community. 4. Includes policy implementation on local and regional level as well as storm preparedness and mitigation for landscapes. Funding: This funding includes complete development of 15 arboretum inn the six coastal counties. Project elements include planting over 50 native species trees (1-3) inch trunk diameter), tree	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	Yes		Yes	water qua	$ 420,000.00	$ 50,000.00	

	Research and Education	1263	12/4/2013	Coastal Exhibits and Promote Natural Resource Stewardship and Enviromental Education	1. Promote natural Resource Stewardship and Environmental Education: MMNS proposes to promote and enhance coastal natural resource stewardship through environmental education efforts that include formal and informal education opportunities, professional development for teachers and outdoor activities for all ages. The types of projects and programs that could be implemented under this objective may include: environmental stewardship and education programs tied to gulf Coast resources that encourage and coordinate the use of existing environmental education and outreach networks and institutions; establish a more effective relationship between research and education communities; and provide meaningful hands-on ecosystem education that includes local. cultural, environmental and economic values with the belief that education will encourage action toward a healthier Gulf Coast. 2. Touch Screens for current coastal exhibits: Technology provides museums with new ways to educate, entertain, and to connect larger and more diverse audiences. In short, the old paradigm of films, tape recordings, signage, and brochures is being replaced by a new paradigm of interactive mobile phone applications and social media. State-of -the-art technology provides expanded tools for learning because it is portable, flexible, and affordable. Elo Touch screens will be installed in three coastal exhibits. The exhibits are Mississippi Sound, Brackish Marsh, and the Barrier Island Grass Beds. A media player is included wit each monitor. 3. Pop-Tank 4. 2-Cylinder Tanks 5. Custom Mobile Touch Tank: A new self contained mobile touch tank designed to mimic the habitat on Mississippi's amazing barrier islands. This mobile touch tank will present wonderful marine creatures from the Gulf of Mexico in a format representative of this facility and our state. The museum's exhibits build on children's natural curiosity about the world around them and foster a sense of wonder about nature. They are designed specifically to encourage family learning and to help young children develop science skills through play and exploration. These exhibits would represent coastal habitats and display animals specific to the coast.	n/a	Yes	No	No	No	No	No	Yes		No		$ 208,019.00	$ -	
	Research and Education	1266	12/4/2013	NRDA Project Proposals State of Mississippi May 13, 2011	The Nature Conservancy in Mississippi is pleased to present the following Project Proposals that we feel are eligible for early NRDA funding based on guidance provided in the "Framework for Early Restoration Addressing Injuries Resulting from the Deepwater Horizon Oil Spill" document. These Projects support the conservation and restoration of critical Gulf of Mexico habitat types including sub-tidal oyster reefs, coastal marsh and forest, sea grass beds and acquisition and restoration of critical coastal lands through the existing Coastal Preserve Program of Mississippi administrated by the Mississippi Secretary of State's Office and the Department of marine Resources. Specifically, these projects meet the requirements delineated in paragraph 6 in that they: - Contribute to making the environment and public whole by restoring, rehabilitating, replacing, or acquiring the equivalent of nature resources or services injured as a result of the spill; - Address one or more specific injuries to natural resources or services associated with the incident' - Seek to restore natural resources, habitats or natural resource services of the same type, quality, and of comparable ecological and/or human use value to compensate for identified resource and service losses resulting from the incident; - Are not inconsistent with the anticipated long-term restoration needs and anticipated final restoration plan; and - Are feasible and cost-effective. The Nature Conservancy has been actively engaged in conservation of the Gulf of Mexico ecosystem for nearly 40 years including over 15 years in Mississippi. During that time we have restored or protected hundreds of thousands of acres of a variety of habitat types across the five Gulf states in partnership with our state and federal colleagues as well as private landowners and businesses. We are well-versed on the ecology of the Gulf and are expert at developing, implementing, and monitoring restoration projects. 1. Hancock County wetlands stabilization and oyster restoration project 2. Restoration and enhancement of coastal marsh and transitional forests in Coastal Mississippi 3. Using living shoreline technology to mitigate the effects of previously hardened shorelines 4. Living shorelines - wetlands restoration projects, Mississippi Gulf Coast, Harrison and Jackson Counties 5. Sub-tidal oyster reef restoration in Biloxi Bay, Mississippi 6. Sub-tidal oyster reef restoration in Bay St. Louis, Mississippi 7. Mississippi Coast wide seagrass community based conservation program 8. Acquisition of property on Round Island, Jackson County, MS 9. Acquisition of property on Deer Island, Harrison County, MS 10.Acquisition of Private Coastal Lands for Preservation, Hancock, Harrison, and Jackson Counties, MS	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 51,535,865.00	$ -	
	Research and Education	1269	12/5/2013	Ecological Restoration of Slash Pine on the Barrier Islands and Coastal Wetlands	Hurricane Katrina and the BP oil spill were very damaging to the barrier islands of the Mississippi, Alabama and Florida Gulf Coast. There is a consensus developing that some restoration of the island ecosystems will be required, including replanting the vegetation, especially the trees. Nothing has been written about the seed sources of the restoration plantings. The arboreal vegetation of the barrier islands of the eastern Gulf Coast of the US consists mostly of slash pine (Pinus elliottii var. elliottii) and live oak (Quercus virginana). During tropical storms, these islands are often inundated with sea water. After Hurricane Katrina (2005), 80% of the slash pine and 50% of the live oak were dead within a few months after the storm. There was very little wind-throw. The mortality was undoubtedly due to exposure to sea water. With these events occurring every decade or so, one might expect that natural selection would result in some genetic adaptation in these populations to temporary salt water inundation. Slash pine occurs not only on the barrier islands but well inland, far from salt water exposure. Seed sources normally found in commercial nurseries are derived from inland populations. It could be a serious error to replant the island vegetation with inland sources that are not adapted to salt water exposure. Mergen et al. (1966) compared barrier island slash pine with mainland sources and found morphological differences. Salt tolerance was not studied. Land (1973) found salt tolerances higher in slash pine than in loblolly pine. It is not a coincidence that slash pine is the only pine found on the Mississippi barrier islands. This study will seek to explore genetic differences in salt tolerances among half-sib families and populations of island and mainland slash pines, with the goal of identifying appropriate salt-tolerant seed sources to use in restoration projects. Seed will be collected from individual trees of three types of populations: 1.**B**arrier island slash pine, attempting to sample all barrier islands; 2.**B**each populations adjacent to the island populations, i.e., populations exposed to salt water through tidal actions; and 3.**M**ainland populations sampling south-to-north transects starting at points ranging from southeast Louisiana to northwest Florida. Seedlings will be grown for several months and then tested in replicated trials by dipping in artificial seawater. In addition, DNA samples will be tested to determine the level of genetic diversity and differentiation in these populations. Both sets of information will be utilized to recommend and develop adapted seed sources for reforesting the barrier islands and coastal wetlands. At present, seed samples have been collected and GPS-located from Cat Island (Mississippi), Deer Island (Mississippi) and northern Harrison County, Mississippi, and pilot studies on salt tolerance testing have been initiated. This study will have an important impact on the management of slash pine ecosystems throughout the Gulf Coast by providing guidance to restoration efforts. There will also be a significant educational impact, due to the involvement of cooperating university scientists and graduate students.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 2,750,000.00	$ 250,000.00	
	Research and Education	1273	12/9/2013	Adaptive Sports Program	"If they dream about it, they can do it!" Provide a means for all people to enjoy inlet waterways and adapt multi-use facility to accommodate mobility impaired citizens and wounded warriors. -New and existing multi-use facilities need to be built or added to for accommodating mobility impaired citizens and wounded warriors. To enable Disability Community options enhancements of family Orientated Recreational Activities /Educational/Stewardship programs for all ages or even physically unconditioned Citizens	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	No	Yes		Yes		$ -	$ -	
	Research and Education	1277	12/16/2013	Comprehensive assessment of the western populations of the threatened Gulf sturgeon, Acipenser oxyrinchus desotoi: long-term movements and occupancy patterns, short-term residency patterns, environmental correlates of estuarine/marine movement, and trophi	Eighty five percent of all sturgeon species on Earth are at risk of extinction, placing them on the International Union for the Conservation of Nature Red List of Threatened Species (Anonymous 2010). Overfishing and population declines due to human development (e.g., dams, low water sills) and catastrophes (i.e., Hurricane Katrina, Deepwater Horizon oil spill (DWH)) are problematic to the recovery of sturgeons, many of which do not spawn annually and can live to be 100 years old. It was evident post DWH that there was a lack of existing data regionally on a number of important ecological patterns of all taxa which would allow scientists, managers, NGOs, and NRDA to assess any potential damage to the environment from the largest accidental oil spill in history (Alford et al. 2014). This project would partner and enhance three existing acoustic array projects that are currently funded to study the western population (Pascagoula and Pearl River populations) of Gulf sturgeon, Acipenser oxyrinchus desotoi, through assessment projects from USACE (Mobile District, through 2017) and Atkins International Consulting (Gulfport Pt Authority expansion project, through 2014) and the Pascagoula River estuary project (3 yr NOAA, ending 2014). The project proposed here will focus on four themes: 1) Long-term movement and regional occupancy; 2) Short-term, high resolution movement and occupancy in estuaries; 3) Trophic ecology via stable isotope analyses (SIA); and 4) Predict Gulf sturgeon estuarine/marine movement patterns relative to water quality indicators (water temperature, salinity and dissolved oxygen), surface current speed and direction, and meteorological variables (wind and surface current speed and direction and rainfall). Conducting a comprehensive assessment of the western population will allow scientists and managers needed information on larger spatial and temporal scales over which to effectively manage and conserve this threatened species. The extensive data collected will also allow state and federal agencies and NRDA to more effectively assess future environmental impacts and damages. These data sets will also be extremely useful to any state and federal agency whose mission is to manage Threatened and Endangered species in light of probable restoration activities due to DWH via funding from RESTORE/NFWF/MSDEQ/MSDMR or other venues. The USM Fisheries Ecology and ERDC laboratories jointly have extensive experience with Gulf Sturgeon (Heise et al. 2004, Ross et al. 2009, Havrylkoff et al. 2012, Peterson et al. 2014), and its ecology and conservation and work closely with NOAA and USFWS on its recovery plans. Jointly, our team we will become the Central Point of Information and data collection on the long-term and short-term occupancy (via Vemco VR2W Positioning acoustic System (VPS); movement patterns of Gulf Sturgeon, and use of federally-designated critical benthic habitat (river, bays, nearshore areas, and barrier islands) for the entire Mississippi Sound region.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 4,230,000.00	$ -	

	Research and Education	1278	12/16/2013	MONITORING MARINE MAMMALS IN THE MISSISSIPPI SOUND AND ADJACENT COASTAL WATERS - Research, Education and Outreach Program	Coastal marine mammals are at higher risk of being adversely impacted by the intense human activities in these regions. Lack of basic knowledge about marine mammal (MM) populations in the MS Sound and adjacent waters precludes conservation of these protected species and hinders the ability of natural resource managers to assess the impacts of human-related activities such as the Deepwater Horizon oil spill. In the Gulf of Mexicoâ€™s (GOM) estuaries and coastal waters, including the Mississippi Sound, the bottlenose dolphin (BD) is the most common marine mammal species. As a marine top-predator, BDs are prone to accumulating toxic compoundsâ€”for example by consuming contaminated preyâ€”which are transferred to their offspring via lactation at higher concentrations. New techniques in MM research coupled with the fact that BDs are long-lived, top predators with a diverse diet (e.g., squid, shellfish, fish) allow their use as prime indicators of marine ecosystem health (Wells et al. 2004). This year, an Unusual Mortality Event (UME) of BDs on the East coast was linked to an epizootic case of morbillivirus. The largest UME declared in U.S. history is on-going in the GOM, encompassing the coastline from the Texas/Louisiana border to Franklin County, Florida. Since 2010 more than a thousand dead dolphins have been recorded in this UME. Mississippi is second only to Louisiana in the number of stranded dolphins; so far the causes of this UME have not been identified. The DWH oil spill and the UME significantly raised awareness about the inadequacy of Gulf-wide baseline knowledge for estuarine and coastal BD populations and how it limited the assessment of the DWH oil spill impacts on marine mammals (MMC 2013). This is particularly problematic for these BD stocks, including the MS Sound stock, because of their â€œstrategicâ€Status (i.e., population shows signs of decline or high human-caused mortality). The failure to meet monitoring obligations mandated by the Marine Mammal Protection Act, is in part due to the daunting number of management units defined for the conservation of BD populations (>30 stocks) in the GOM. Although an abundance estimate was produced for the MS Sound (Miller et al. 2013) BD population for 2007, the official stock estimate is still considered unknown (Waring et al. 2013) for management purposes because the study area did not fully align with the geographic delineation of the MS Sound stock. Another limitation in evaluating impacts on the MS Sound BD population, is the uncertainty about whether the current stock delineation is supported by genetic and/or behavioral data. Whether the MS Sound consists of genetically uniform groups is unknown. Knowledge about the behavior, residency and movement patterns of dolphins is essential even in the absence of genetic distinction among groups because discrete communities, arising from a tight social structure and high site-fidelity, also require monitoring under the MMPA. The primary goal of this project is to combine abundance, behavioral and genetics data to better understand BD population structure (i.e., identify geographic boundaries of the stock) in the MS Sound, which is essential to evaluate impacts of future oil spills and Unusual Mortality Events (UMEs). Assigning mortality events (i.e., stranded dolphin carcass) to the source population is critical to evaluate the significance of adverse impacts on a specific stock. Using coastal and ocean circulation modeling, we will develop a tool that allows managers to predict the likely source of stranded carcasses. In addition, these models will examine whether mortality on the MS Sound, based on the number of stranded carcasses on the coast, is under- or over-estimated due to transport by ocean currents. Several UMEs in the GOM, and recently on the Atlantic coast, have been attributed to microorganisms, including dolphin morbillivirus. Morbillivirus affects the central nervous system causing problems with swimming, diving and navigation and, ultimately, stranding. Dolphin populations may be more susceptible to contracting a fatal disease when experiencing stressful conditions (e.g., oil spill, scarce prey). Microbiomics, the identification of bacteria and viruses by means of nucleic acid extraction and identification (sequencing), is a powerful method for describing microbial diversity on	Jackson	Yes	No	No	No	No	Yes	No		No		$ 5,000,083.00	$ -	
	Research and Education	1279	12/16/2013	Mississippi Reef Fish Program: Addressing Data Needs for Regional Management of Red Snapper and Assessing Reef Fish Ecosystem Function	The red snapper, Lutjanus campechanus, is the most economically important reef fish species in the Gulf of Mexico (GOM), supporting major commercial and recreational fisheries in the five Gulf states. The stock has, however, been overfished since the 1980s, prompting the Gulf of Mexico Fishery Management Council to adopt the Reef Fish Management Plan in 1984 to institute catch limits and seasonal closures on the fishery. A subsequent rebuilding plan was approved in 2001 with the goal of recovery of the red snapper stock by 2032. Despite these efforts, a combination of increased directed effort, repeated quota overages and uncertainty about stock status has resulted in more restrictive management measures. For instance, the recreational red snapper season in the GOM has been incrementally reduced from a year-round season (365 days) prior to 1997 to only 28 days in 2012. Over the same time period, the size limit has been increased from a 13-inch to a 16-inch minimum length, and the daily bag limit has been decreased from seven to two fish per angler. As a result, the management of red snapper has become quite controversial. Compounding this management issue are impacts to red snapper stocks from the Deepwater Horizon oil spill in 2010. The release and dispersal of oil from the damaged MC252 well encompassed natural and artificial reef areas that serve as primary habitat for the species, thereby jeopardizing biological and ecological function of juveniles and adults. Further, red snapper spawn from May through September in Gulf waters, a time period overlapping the spill, and those pelagic larvae would have been subjected to oil exposure in the water column during their pre-settlement phase. While the scale of oil impacts remains undetermined, the distribution and benthic nature of red snapper made them particularly susceptible to oil exposure, and the stock was undoubtedly impacted by the Deepwater Horizon event. The State of Mississippi currently manages more than 16,000 acres of permitted offshore reef sites at 15 fish havens north and south of its barrier islands, and an additional eight sites are part of the Mississippi Rigs to Reef Program, coordinated with the Bureau of Ocean Energy Management. However, unlike Alabama and Louisiana, Mississippi currently does not utilize a standardized reef fish sampling protocol. Therefore, data on abundance, distribution and life-history characteristics of reef fish occurring at those locations that could contribute to regional management decisions are lacking. Given the uncertainty in various stock parameters for GOM red snapper and the unknown status of spill-related impacts, the purpose of this program is to obtain comprehensive ecological data on reef fish species occurring in northern GOM waters off Mississippi for use in regional stock assessment. Data on abundance, size and age composition, feeding, habitat use, population structure, movements/migrations, growth rates, mortality rates, and habitat value will address significant gaps in our knowledge of fishes inhabiting Mississippiâ€™s offshore reefs. A unique aspect of our approach is to use cultured red snapper to validate estimates of vital rates obtained with more traditional sampling techniques. Releasing tagged cultured fish of a known age and health status will contribute to a better understanding of red snapper biology and habitat quality. By addressing key data gaps, this program will benefit the reef fish management process, serve as a basis for the regional management of GOM red snapper, and enhance the recovery and sustainability of the resource. Additionally, project sampling will provide new data for determining the distribution and ecology of invasive species such as the lionfish, which has been shown to impact reef ecology by altering trophic dynamics. Based on the needs identified herein, we propose to: 1) implement standardized sampling protocols to fill data gaps for red snapper and other reef fish species occurring at Mississippi artificial reef sites to support regional assessment and management; 2) utilize traditional and acoustic tagging techniques to determine habitat use, movements/migrations, growth and mortality of wild red snapper;	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 14,600,544.00	$ -	
	Research and Education	1280	12/16/2013	Emerging infectious diseases affect recovery of coastal marine ecosystems	The problem Salt marsh and oyster reef habitats support complex communities of plants and animals, that are the foundation for coastal ecosystem services. Among the more important services are nutrient removal, storm surge protection, and nursing commercially and recreationally important species. Unfortunately, salt marshes and oyster reefs are among the most vulnerable and declining of habitats. Climate change and natural events such as hurricanes and anthropogenic disruptions such as Deepwater Horizon oil spill are contributing to the decline of these biological communities. Epizootics of infectious diseases that emerge as a result of such natural and anthropogenic disturbances suppress or remove species from the communities and affect the health of plant and animal communities thus compromising recovery and functioning of the coastal ecosystem. The solution To remedy the disruption to salt marshes and oyster reefs from epizootics of infectious diseases following the Deepwater Horizon oil spill, we propose a multifaceted program to address important nonindigenous and indigenous pathogens, determine the roles and consequences they have for recovery and restoration of Mississippi salt marsh and oyster reef communities, and assess their threats to human health. The multidisciplinary program will elucidate the patterns and dynamics of occurrence and the infection and transmission dynamics of these emerging infectious diseases (EID). The proposed program will provide the ability to evaluate the consequences of outbreaks, assess the likelihood of emergence of coastal diseases, and provide effective management strategies for resource managers, conservationists, and public health officials.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 7,941,630.00	$ -	
	Research and Education	1281	12/16/2013	Evaluation of best management strategies for restoring carbonate-dependent habitats such as oyster reefs in estuaries and the near shore of Mississippi	Oysters and oyster habitat are among the nearshore and estuarine habitats most susceptible to the vagaries of man. The Deepwater Horizon oil spill and its aftermath including the opening of freshwater spillways to limit oil incursion devastated the oyster population over much of the Louisiana coast east of the Mississippi River eastward through Mississippi Sound. Even prior to the spill, regional investment in oyster reef revitalization and restoration was significant every year; post spill, this will only increase. Oysters are the dominant nearshore producers of carbonate upon which their habitat and a range of valuable ecosystem services depend. But, other carbonate producers influence soft-bottom habitats over much of the estuarine and nearshore region. Although time-honored practices are routinely used in reef restoration, rarely have they been rigorously evaluated. In addition, little attention is given to the vastly larger in acreage soft-bottom habitats where recent evidence suggests carbonate production may play an important role and which may be equally sensitive to environmental assaults stemming from decisions on freshwater diversion, pollutant impact, and resource management. What has not been implemented is a rigorous and encompassing evaluation of carbonate management, comprehensive of the reefal and adjacent soft-bottom region, directed both at best practices for restoration and for sustainable management. We propose a study that will identify a new standard in restoration management in which investment is made based on scientific principles and in which project design results from goal-oriented application of these principles with sustainability as an underlying requirement. The challenge is not just to revitalize an oyster population, but rather to restore to long-term sustainability the habitat (reef) itself. This challenge involves not just improved application of present knowledge on oyster population dynamics, but also the application of the basic principles controlling the fate of carbonate in the coastal zone. We propose to extend this project onto the soft bottom where limited attention may hide substantive long-term compromises in function urgently in need of redress. The proposed effort has broad implications. Carbonate is at the nexus of the human and natural world in our estuaries and lagoons. Most commercial species are carbonate-producing organisms (e.g., shellfish) or animals dependent upon or benefiting from carbonate production. Bivalves generate a dominant habitat type (e.g., oyster reefs), yield important commercial products (e.g., oysters, clams, scallops), provide a high-value food resource to other species (e.g., crabs, fish) and are impacted by the activities of a diversity of organizing management bodies and private sector parties. Stocks are managed for commercial production. Habitats are managed for ecosystem services. Tax dollars are invested in restoration activities by federal and state agencies, and non-profit groups. Fisheries are prosecuted in a number of strategies, including transplant of seed and wild harvest of adults by tong and dredge. The expectations that exist often result in competing uses of carbonate, poorly resolved goals for its management, and undesirable outcomes of management activities. The complexity of management goals and strategic options depends upon the application of sound scientific principles in a culturally astute way. Implementing scientifically-tested best management practices will allow this outcome to be fully realized. Our goal is to develop improved options based on the biological and geochemical principles controlling the fate of carbonate in the coastal zone and merge these with the necessary cultural and economic realities of carbonate management to address the critical challenges facing the competing uses of carbonate in the coastal zone. We will include significant empirical tests of options for carbonate addition and management to provide the first rigorous information from which long-term environmental and habitat outcomes can be judged. We will also include extensive educational and outreach efforts designed to disseminate the scientific approach and findings of the proposed research not only to secondary school students but also to key regulatory bodies, fishermen organizations, and management agencies to achieve improved management goals and more successful and sustainable outcomes.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 4,900,000.00	$ -	
	Research and Education	1282	12/17/2013	Developing a novel framework to evaluate structure and function of coastal wetland restoration in a spatial-temporal context using coastal preserves as reference sites	In light of damages to salt marsh resources following the DwH oil spill, it is anticipated that substantial efforts will be focused on restoring salt marsh habitats within the northern Gulf of Mexico region. In order to track the recovery of ecosystem services and function of restored salt marshes, USMâ€™s GCRI Coastal Ecosystems Group (CEG) and MSU Coastal Research and Extension Center propose to conduct integrated assessments of the functional equivalency of restored and reference salt marsh habitats at various levels of trophic and landscape organization. The proposed project will assess the functional equivalency of restored/created salt marshes compared to reference habitats found on the MS Department of Marine Resources (DMR) Coastal Preserves using an integrated approach involving: primary production, benthic secondary production, nekton abundance, marsh bird communities, and trophic linkages assessed using stable isotope analysis (SIA). These trophic levels are important in understanding production and use of salt marsh habitat as a nursery and the role restoration has in restoring these functions. Additionally, we will be estimating a number of important water and sediment quality and quantity metrics that are vital to development of a better understanding of salt marsh function. The proposed project will address issues related to conservation, preservation, and enhancement of emergent salt marsh habitat. We will develop standardized quantitative assessment metrics that can be utilized at future created salt marsh sites in coastal Mississippi and the Gulf of Mexico region. SPECIFIC ACTIVITIES: 1.Building A Geodatabase On Marsh Restoration Projects We will develop a geodatabase using GIS by compiling permits from previous coastal marsh restoration projects in Mississippi from the US Army Corps of Engineers Mobile office and the MSDMR. This database will provide information on the geographic location of restored/created marshes, when they were built, and other related information. Such a database does not currently exist and is a critical need, not only for this particular project, but also for the broader research and resource conservation management in the Gulf of Mexico region. In order to develop an efficient experimental design that covers spatial and temporal gradients required to assess salt marsh restoration success, the information collated in the geodatabase will be used to choose a range of ages (10-15 years and <5 years) of restored/created sites and these will be paired with adjacent natural reference sites (located on Coastal Preserves). The study marshes will be stratified into two broad types based on the ecological processes that drive them; namely riverine-dominated (e.g., Pascagoula or Pearl River marshes) versus marine-dominated systems (e.g., Grand Bay NERR). At each site we will be looking at the temporal/spatial functionality of marsh ecosystems from a variety of perspectives outlined below. 2.Developing Standardized Methods For Functional Assessment: a)Plants and benthic microalgal primary production b)Invertebrates and macrobenthic secondary production c) Resident nekton and reproduction function d) Resident marsh birds as trophic indictors e) stable Isotope Analysis and trophic linkages f) Landscape configuration and habitat modeling	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 8,000,000.00	$ -	

	Research and Education	1283	12/17/2013	Whale Sharks in the Gulf of Mexico: Conservation Research in the Aftermath of the Deepwater Horizon Oil Spill	Although the whale shark is the largest fish in the ocean, very little is known about its biology and ecology. Prior to the Deepwater Horizon oil spill (DWH) in 2010, we, researchers at the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory (USM GCRL), were just beginning to uncover some of the facts surrounding the occurrence of whale sharks in the northern Gulf of Mexico (GOM). The majority of reported whale shark sightings in the northern GOM are along the continental shelf edge in the waters just off of Alabama, Mississippi, and Louisiana, most notably south of Mississippi off the Mississippi River Delta (Hoffmayer et al. 2005; McKinney et al. 2012). Although typically solitary, a predictable, large aggregation of whale sharks forms annually during summer in the northern GOM (Hoffmayer et al. 2007) (Figure 1). When historic sightings data from 2003 to 2009 were overlaid by oil spill trajectory maps, it became apparent that a significant number of whale sharks likely encountered oil during DWH (Figure 2). During spill related aerial surveys conducted by the National Oceanographic and Atmospheric Administration in June of 2010, scientists photographed multiple whale sharks swimming in heavily oiled surface waters (Figure 3). Whale sharks are filter feeders, and their methodology of feeding involves skimming or vertically engulfing surface waters to filter out small plankton, including fish eggs and larvae. Therefore, swimming and feeding in oiled waters could result in oil and other spill-related toxins coating gill surfaces and affecting respiratory processes. Even if the oil and oil/corexit dispersant mixture sank, whale sharks make regular deep dives to the ocean bottom (Graham 2006, personal unpublished data) and therefore could be exposed to oil and associated pollutants at any point in the water column. Sharks in general, are negatively buoyant and, unlike other fish, sink when they die; therefore, it is difficult to observe mortality in whale sharks such as that possibly occurring due to DWH. Only inferences and comparisons of limited data can be used to determine the effect that DWH had on northern GOM whale sharks. USM GCRL has maintained an online sightings report database since 2003 to accommodate the reporting of whale shark sightings in the GOM by citizen scientists (i.e., commercial and recreational fishers, offshore petroleum industry workers, divers, etc.). To date, the database contains more than 600 reports. The number of sightings reports from 2010 to the present time (2013) has decreased by 37%. The annual summer aggregation event which typically consisted of 20 to 200 individuals (data from 2005-2010), has also decreased in size and consisted of only 12 to 24 individuals in reports from 2011-2013. It is unknown if the decreased number of sightings and overall reduced aggregation size in the northern GOM is due to a lack of actual sightings being reported, a lessened effort by the offshore community to be in areas where sightings might occur, or if fewer whale sharks were in the region as a result of mortalities or displacement due to DWH. However, given that genetic analyses have shown that whale sharks are one global population (Castro et al. 2007, Schmidt et al. 2009), and attempts at developing Atlantic/Caribbean inhabitant estimates suggest that this group is conservatively comprised of only ~1900 individuals (McKinney et al. 2013), any deleterious impacts, such as those of DWH, could be resounding for the whale shark species as a whole. The International Union of Conservation of Nature has already listed this species as â€œVulnerable.â€Therefore, habitat requirement and inhabitant composition data for this species in our region is essential if we are to effectively conserve this species in our waters. With this project we propose a multidisciplinary approach to define aspects of whale shark ecology in the northern GOM that are essential to the conservation of this highly vulnerable species. The objectives of the project are to: 1) derive northern GOM annual abundance estimates, 2) determine seasonality, residency time, and life stage compositions, 3) determine seasonal habitat requirements, 4) identify long-term migratory patterns and connectivity with other ocean regions, and 5) evaluate the health and genetic structure of the northern GOM group. Encountered whale sharks will be 1) tagged with a satellite/archival tag to track movement, 2) photographed for spot pattern identification and tracking by the Wild Me (formerly ECOCEAN) database, 3) biopsied for muscle tissue for examination of health indicators, genetic relatedness, and stable isotope analysis, 4) measured in total length to determine life stage and 5) identified as male or female. At each encounter site, plankton tows, water quality data, and date/time/GPS information will be collected.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 12,775,119.00	$ -	
	Research and Education	1284	12/17/2013	K-12 Environmental Education Field Program	The CNDG proposes to develop and implement an environmental education program for K-12 students in Hancock, Harrison and Jackson counties. The program will provide high quality, curriculum-based field experiences for 15,000 students each year. Partner organizations will provide science-based hands-on field experiences so that students can learn about the critical habitats and environmental processes necessary to maintain the health of the Gulf of Mexico. CNDG is a partnership of Gulf Islands National Seashore, Gulf Coast Research Lab, Pascagoula River Audubon Center, Land Trust for the MS Coastal Plain, Grand Bay NERR, MS Gulf Coast Community College Estaurine Education Center, and the MS Sandhill Crane Refuge. The proposed environmental education field education program will provide field experiences for every student in the three coastal counties at three different grade levels. The program will include classroom activities, curriculum-based field experiences, and follow-up activities. Stewardship concepts and service opportunities will be embedded in the curriculum as well. Each student will experience and study a variety of critical habitats during their K-12 school years. These habitats include: pine savannah, maritime forest, bayou and riverine habitat, marsh, marine environments, and the barrier islands.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -	
	Research and Education	1285	12/19/2013	Hiller Park Renaissance Garden Educational/Restoration Project	The Mississippi Renaissance Garden Foundation's (MRGF)Horticulture for Humanity (H4H) movement began as an environmental recovery effort in the aftermath of Hurricane Katrina. Our mission is empowering humanity through horticulture. A 1.4 acre Hiller Park Renaissance Garden (HPRG) site on Back Bay Biloxi was leased from the city of Biloxi in 2007. The huge oak trees, nearby stream, waterfall and woodlands provide a tranquil retreat and family friendly learning destination. A future nature trail, organic gardening demonstrations, including worm composting and drip irrigation will support a community garden. HPRG has become the cornerstone of the MRGF efforts. Today, this all-volunteer undertaking utilizes this centrally located botanical and edible demonstration garden to support H4H educational goals. HPRG features labeled plants, trees, flowers and inspirational areas promoting the coastal MS landscape. It highlights plant uses such as food, environmental education, horticultural therapy and native, endangered and historical flora, as well as wildlife habitats and natural waterway uses. A small horticultural center with an office, multipurpose room, library, eco-art exhibit, gift shop, rest rooms and small catering kitchen is planned for visitors of all ages and abilities to learn wise use and conservation of our natural resources and to plant, protect and restore disaster-threatened environments. Requested funds for HPRG would be used for 1)professional assistance to design and construct a green horticultural center utilizing solar energy; 2)an irrigation system and lighting; 3)a green house with shed; 4)two outdoor pergola classrooms; 5)new garden beds and plant signage; 6)accessible walkways; and 7)security fencing. The MRGF assists six gardens maintained by local residents. HPRG would use NRDA funds to assist those gardens to accomplish H4H goals to 1)demonstrate that gardens are inspiring, functional, affordable, attainable and beneficial to the community, its residents, visitors and the economy; 2)increase healthy, sustainable lifestyles and community involvement, 3)distribute free seeds, plants, trees and other resources for their landscapes; 4)provide a base of operations (HPRG) for the MS Gulf Coast Horticulture for Humanity Movement. By addressing the injury to the physical, mental, emotional and spiritual needs of coastal people and injury to ecological, marine and wildlife caused by man-made or natural disasters, HPRG would be a model of its benefits and inspire development of other H4H gardens locally, statewide and nationally. NRDA funding would allow the HPRG and horticultural center to become a major ecological tool in the future of the MS Gulf Coast environment, its people and its nature-tourism industry.		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	1298	1/3/2014	Study of Potential for Contaimination of Raw Water Intake at Cumbest Bluff	The county and port authority own and operate a raw water intake for industrial water supply at Cumbest Bluff on the Pascagoula River. This supply is being used for the Authority's Surface Water Treatment Plant currently in construction. The treatment facility will provide potable water for the southern portion of the East Regional Water System and other potential wholesale water customers in the future such as the Helena Utility District. The mouth of the river at the Mississippi Sound has many possible sources of contamination including chemical manufacturers, oil and gas industry, etc. The Authority proposes to have a study completed to evaluate the possibility of contamination of the water supply from events such as natural disasters, sea level rise, saltwater, etc. Expected questions are, (1) is there any real potential from contamination from the industry along the coast line? (2) what kinds of events have the potential to contaminate the water supply? (3) what recommendations or procedures are necessary to protect the water supply as a supplement to our emergency plans.	Jackson	Yes	No	No	No	No	No	Yes		Yes		$ 500,000.00	$ -	
	Research and Education	1582	7/7/2011	Bay St. Louis Harbor	(ORIGINAL ID#521) To develop a harbor in downtown Bay St. Louis as a catalyst for restoring eco-tourism in Hancock County	Hancock	Yes	No	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1583	7/7/2011	Mississippi By-ways to Space & Mississippi Scenic Beach Boulevard By-ways	(ORIGINAL ID#522) 43 miles of eco tourism by-ways connecting the INFINITY Science Center to the outdoor laboratory to re-establish the visitor market for the gulf coast region	Hancock	Yes	No	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1584	8/4/2011	Low-cost, 10km-range Oil Spill Sensor and Spread-predictive Sensor Deployment	(ORIGINAL ID#633) This project will establish a low-cost, remote oil spread monitoring system with the following features: - Oil Sensor Design: There is an urgent need for inexpensive, weather-robust oil spill sensors that can wirelessly report oil data. Existing oil spill sensing technologies have the following drawbacks: (1) Inaccuracy: Infrared thermal sensing and ultrasonic wave / pulse cannot accurately detect oil existence and oil thickness levels because the temperature, weather, and water current can greatly change their readings. (2) High-cost: SAR imaging and laser fluorosensors use heavy, expensive, large-size devices, and thus are not suitable to large area monitoring. (3) Power inefficiency: Although some wireless sensors can use low-cost light array sensors to detect oil thickness, their chip designs have not emphasized low-power circuit layout. More importantly, it does not have long-distance wireless transmission capability due to its use of common, low-sensitivity antenna (to be discussed in next item). In this research, we will design a low-power, low-cost, weather-robust oil spill sensor and its corresponding sensor operation control software (such as sampling rate adjustment and sleep/wake control). - 10-km oil sensing data transmission: The harsh sea conditions necessitate 10-km-transmittable oil sensors. Due to the large area monitoring of sea surface, the existing wireless sensors cannot be used here due to their short RF communication range (typically less than 100 m). The windy sea weather and harsh water current could make any two neighboring sensors separate from each other for a distance of >100 meters (even though the proposed sensors are adhesive to the oil). In this project, we will use our unique ferrite miniature antenna technology to achieve a 10-km RF communication distance and 1-km neighbor communication range. If an oil sensor cannot use its neighbors to relay the sensing data, it can directly send signals to a wireless base station. Those flo atable base stations are pre-deployed sporadically on the sea surface. A sensor can communicate with its neighbors or 10-km away base stations. - Oil spread boundary estimation: It is important to build an accurate oil spread trend estimation model based on the analysis of the data from oil spill sensors. Such a boundary estimation model can be used to guide the deployment of new sensors (ty	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 350,000.00	$ 1,000.00	
	Research and Education	1587	7/29/2011	BP Deepwater Horizon Oil Spill Restoration Evaluation and Monitoring Program	(ORIGINAL ID#739) The Natural Resource Damage Assessment regulations make clear that final Restoration Plans should include a monitoring component so that the effectiveness of restoration measures can be evaluated. Given that BP is providing $1 billion for early restoration projects before completion of a Deepwater Horizon Restoration Plan, some of these funds should be used to establish a restoration evaluation and monitoring program. There is precedent for funding monitoring activities before an oil spill restoration plan is final. Before a restoration plan was complete, the Exxon Valdez Oil Spill Trustee Council invested funds in tracking injury and recovery at the species level, as well as research and monitoring at the ecosystem scale, to identify restoration opportunities, understand factors limiting recovery, and evaluate the effectiveness of restoration measures. An early and steady flow of information on the recovery status of specific natural resources and ecosystem services generated through this program would help managers make responsive management decisions. Without this information, less effective restoration may result, potentially requiring managers to restrict human uses of these resources. Specifically, a restoration evaluation and monitoring program is needed to: 1) evaluate the effectiveness of early restoration projects; 2) track the recovery of specific injured natural resources or lost or reduced services; and 3) report to the public on the status of injured resources, lost services, and progress toward restoration. Establishing a restoration evaluation and monitoring program for early restoration can be adapted as restoration needs change and transition into a longer-term program. On behalf of the Deepwater Horizon Oil Spill Trustee Council, NOAA, in cooperation with the Department of Interior (USFWS), is in the best position to establish and administer a Deepwater Horizon Oil Spill restoration evaluation and monitoring program. Together, NOAA and USFWS hav e the experience and existing infrastructure to coordinate monitoring across state-federal boundaries. Both agencies would serve as joint custodians of this program. This structure will facilitate the efficient gathering of data that will allow comprehensive monitoring of the full range of restoration activities. Regardless of the entity implementing monitoring, this program will require coordination among trustee agencies and possibly some new data gathering. Each year NOAA and USFWS would produce a report on the results of restoration measures, recovery of injured species, and newly discovered injuries.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ -	$ -	

	Research and Education	1589	8/2/2011	Maritime & Seafood Industry Museum Expansion with Restoration Initiatives	(ORIGINAL ID#761)The Maritime & Seafood Industry Museum located on Pt. Cadet, Harrison County, Biloxi, MS serves as a welcoming beacon to the great City of Biloxi, an educational tool and a superior exhibit, for residents and visitors of the Mississippi Gulf Coast region, and for the great state of Mississippi. The Museum was established in March 1986 to preserve and interpret the maritime history and heritage of Biloxi and the Mississippi Gulf Coast, which came to prominence more than a century ago as one of the worldâ€™s great seafood producers. Since itâ€™s opening, the Maritime and Seafood Industry Museum has become recognized for its interpretation of Mississippi Gulf Coast history, culture, and heritage. The Museum exhibits, the replicated sailing schooners, the educational programs, the schooner pier complex, and the research collections have proven invaluable to the citizenry of Mississippi as well as national and international clientele. Special programs held within the museum, has seen it featured on regional and national television. The Museum expanded another 8,000 sq. ft. in 2003 and in 2005 was destroyed by Hurricane Katrina. The new three story 20,000 sq. ft. museum reopened in August 2014 at a cost of approximately $10 million. Since 1986, the Museum has been on a steady path of accomplishment â€" from our award-winning building to our exhibits and tools â€" but there is much more to accomplish. Our educational and economic impact within the community, the region and the state has made the Maritime and Seafood Industry Museum a destination of enjoyment and a significant economic contributor. Our $8 million expansion would build a state of the art Exhibit Hall that will play host to world class traveling exhibits. The Museum is convinced the addition of the Exhibit Hall will elevate the Museum experience and enhance the regional economy through the distribution of admission dollars and funds raised from sponsored traveling exhibits. It would also enable the Museum a larger venue for convention space for one night events away from the Casinos. Tourism is frequently seen as a way of creating new employment opportunities in regions which have suffered from devastating hurricanes or oil spills. Mississippiâ€™s Gulf Coast has embraced the tourist industry, bringing in major casinos and support services to keep tourist engaged. Visitors stay at hotels, eat at restaurants, visit cultural sites and consume goods and services within a local economy. This serves as an economic boon to drive benefits across many other sectors. Regional museums are an important magnet to draw visitors, as they flavor the experience, present the regionâ€™s history, display their treasures and share the artistic and cultural essence of the region. Giving visitors a variety of exciting activities and events impacts their experience and ensures their return. Recently published reports from the American Alliance of Museums, show indisputable evidence that museums are true economic engines for their communities, supporting jobs and wages that are vital to the health of their hometowns. And, as an industry, Museums have widespread public support that transcends political affiliations and geographic locations. Along with the revenue generated from patron visits, museums have a wider economic impact as they purchase goods and services from local vendors (such as caterers, exhibit designers, and window washers), and provide community gathering spaces and alternate venues for conferences and social gatherings. Now, it is time to enhance our offering to the public, while enhancing the regional economy. And with these goals in mind, we are requesting the assistance of the Resources and Ecosystems Sustainability, Tourist Opportunity and Revived Economies of the Gulf States Act of 2011 (RESTORE).	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 7,549,904.00	$ -	
	Research and Education	1591	8/18/2011	Wolf River Restoration Project	(ORIGINAL ID#849) The purpose of the Wolf River Restoration Project (WRRP)is to facilitate fish, wildlife, and plant habitat protection, restoration, and enhancement, primarily for Federal trust resources including migratory birds, endangered and threatened species, coastal wetlands and marshes, and aquatic resources, floodplains, and riparian areas along the Wolf River in Hancockand Harrison Counties in Mississippi.The core of the WRRP is lands totaling approximately13,969 acres or approximately 28.5 miles of Wolf River Frontage. Residential and commercial development in Hancock and Harrison Counties has seen a tenfold increase over the past two decades. Consequently, much of the lands found within the Wolf River Watershed have been or are under immediate threat of conversion.By purchasing, restoring and preserving this critical drainage and riparian buffer, the Wolf River will continue to provide important freshwater flow into the important tidal marshes of the Bay of St. Louis and the Mississippi Sound.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 42,000,000.00	$ 1,750,000.00	
	Research and Education	1593	8/19/2011	The Gulf Restoration Fund	(ORIGINAL ID#887) The Gulf Restoration Fund supports organizations and individuals working on the restoration of the coastal and marine ecosystems of the Gulf of Mexico. The Gulf of Mexico is the ninth largest body of water in the world and home to over 15,000 different species of plants and animals. While the damages and impact of the BP Deepwater Horizon explosion and subsequent spill are still being assessed, this fund focuses on the other 80% of the Gulf that has been destroyed by decades of coastal development projects, agricultural runoff, overfishing and pollution.	n/a	Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	1594	8/25/2011	Restoring critical habitats in the Gulf of Mexico Marine Protected Area Network	(ORIGINAL ID#904) In April 2011, the Rookery Bay National Estuarine Research Reserve (RBNERR) hosted a two-day workshop in Naples, Florida, with funding support from NOAA's Marine Protected Area (MPA) Center, that brought representatives from four key agencies managing MPAs in the Gulf together to discuss collaborative efforts. NOAA's NERRs and NMS, and DOI's NPS and NWRs were represented. Outcomes of the workshop included a commitment from the Gulf MPA partners to work together to build a framework for regional response to catastrophic events such as the Deepwater Horizon spill, share information and technology relating to climate science, and to seek regional opportunities to advance common stewardship goals of MPAs such as habitat restoration. A regional approach to restoring critical marine and coastal habitats within the Gulf of Mexico MPA Network has significant benefits: -Gulf MPAs already have long-term monitoring and GIS capabilities that can effectively track changing environmental conditions correlating with restoration success, such as water quality. -Gulf MPAs have on-the-ground programs in place designed to provide protection and increase awarenewss of the need to conserve resources, such as law enforcent, education, outreach and training, visitor use management, and active community-based volunteer programs. -Gulf MPAs have a diverse range of critical marine and coastal habitats within their designated boundaries (e.g corals, seagrasses, oyster reefs, mangroves, saltmarshes) including offshore submerged resources, that link directly to the life cycles and migratory patterns observed in economically important marine species including various species of sportfish, shrimp, and crabs. Envisioned is a three-year regional collaborative restoration project that builds on the strengths of the newly established Gulf of Mexico MPA Network noted above. RBNERR, with support from NOAA, is currently working on developing the initial framework and communications/training supp ort for the Gulf Network. The proposed regional habitat restoration project would have three components: (1) Year I: Gulf MPAs will work collaboratively within the Network to identify high priority habitats suitable for restoration that meet criteria for regional linkages, and develop a regional scope of work for restoring habitats within 8 - 10 MPAs. (2)Year II: Gulf MPAs initiate site restoration projects, engaging community volunteers as appropriate and monitoring progress. (3) Year III: Gulf MPAs complete site restoration projects, continue monitoring efforts, and conduct targeted outreach to raise awareness of value of restored Gulf habitats.	n/a	Yes	No	No	No	No	Yes	No		No		$ 50,000.00	$ 35,000.00	
	Research and Education	1595	8/31/2011	Ohr-O'Keefe Musuem of Art Native Habitat Restoration Project	(ORIGINAL ID#960) In 2010, the Ohr-O'Keefe Museum of Art received funding from the MS Coastal Impact Assistance Program to development a landscape master plan focusing on the conservation, protection and restoration of the Museum site fronting the Mississippi Sound. The grounds of the Museum will be restored with native plants, the site becoming a living laboratory for coastal restoration projects including heritage plantings and wetlands restoration. The site will serve as a microcosm of naturalized coastal landscape and topology. The project will provide a permanent, very visible forum increasing public awareness of environmental issues and improving stewardship of the Mississippi coastal ecology by example. The plantings will serve as an educational tool coordinating a permanent exhibition documenting the coastal habitat restoration areas of the Museum grounds with a key and written material available to school groups and other visitors to the Museum. The Ohr-O'Keefe is requesting funding to implement the Museum's restoration/landscape project. In May 2011, landscape architect Thomas Doyle of LA+ South Inc, with a team of geologists, wetlands scientists and botanists completed the master plan for the landscape architecture of the Ohr-O'Keefe Museum site. This plan is an overview of restoration plantings of native species, including replacement of Live Oaks trees and other site specific species, for upland, freshwater wetland and beach/dune habitats as well as pedestrian circulation and human impact. The landscape master plan was approved by the Museum Board of Trustees Executive Committee in June 2011. The projected start date for the project is September 2013, when construction of all buildings has been completed. The time frame for the project is 10-14 months; the total budget is $800,000.00. Benefits derived from this project include stabilization, restoration, and preservation of an important coastal ecosystem, enhancement of natural scenic qualities in the coastal are a, and education of 75,000+ visitors annually regarding the importance of restoration and preservation of natural habitats and coastal wetland areas through exhibitions and educational programs at the Museum. Area school teachers will have the opportunity to use the Museum's living laboratory as a visual learning technique integrating the Museum grounds and information into their lesson plans in academic subjects required by the Mississippi standard course of curricula.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 800,000.00	$ -	
	Research and Education	1602	4/21/2011	Integrated Approach to Wetland Damage Assessment, Vegetation Monitoring, and Restoration Tracking in the Gulf of Mexico	(ORIGINAL ID#2103) Problem Statement: Tidal wetlands bordering the Gulf of Mexico, including Federal wetlands in National Wildlife Refuge (NWR) areas, are at risk of being impacted by the oil that continues to wash ashore. A comprehensive and accurate determination of the impact over vast remote areas is not feasible with traditional survey methods. In order to identify and implement the most cost-effective solutions necessary for remediation/restoration; a unified, systematic approach using airborne remote sensing coupled with land-based restoration technologies can be implemented to 1) efficiently identify the extent of impacted wetlands, 2) effectively guide the remediation/restoration process from planning to completion, and 3) provide a calibrated measurement of the effectiveness of the remediation/restoration efforts over the long-term. Proposed Solution: SpecTIR proposes to provide comprehensive monitoring and restoration services along the Gulf coast using a proven combination of commercially available aerial remote sensing applications and innovative assessment and monitoring techniques that will promote program efficiency and cost-effectiveness. The team will use a scalable, phased approach that will identify impacted wetlands and allow for the prioritization, planning, and performance of restoration efforts. Additionally, the proposed methodology will provide a consistent and scientific means for accurate and quantitative post-restoration monitoring. The first phase of the proposed approach is to provide a baseline for restoration by collecting airborne hyperspectral imagery or, in the case of many Gulf coast NWR wetlands, assessment of the hyperspectral data already collected prior to impact from oil. Guided by initial analysis of the airborne data, groundtruthing verification and validation of the wetlands will then be performed. SpecTIR will provide the existing 2000 sq km of pre-oil, baseline hyperspectral data collected from Gulf coast NWR areas prior to th e oil entering the wetlands. The use of hyperspectral imagery for the discovery of hydrocarbons in the wetlands has been proven in the NASA funded VNIR study of an oil spill in Swanson Creek MD in 2000. The current instruments now include the SWIR portion of the spectra which brings an even higher degree of accuracy to the identification of the vegetative stress and community structure. Data and analysis will be collected into a GIS platform and be deseminated online to effectively guide restoration planning and implementation. Post restoration remote sensing monitoring will be performed to track changes in restoration success relative to the baseline data as well as coincidently identified non-impacted sites. This data will be supported with ground truthing, data verification, and sampling by qualified field teams. Once the levels of impact to the wetland vegetation has been ascertained and prioritized, the information can be used to assist in the formulation of remediation and restoration plans. Going forward, progress can be monitored with the identical methodologies and technologies used in the initial assessment.	n/a	Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	1607	10/25/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11419) Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental wellbeing of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON) - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland- Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fish varies among species. This necessitates the collaborative invo lvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -	

	Research and Education	1608	10/26/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11421) Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental wellbeing of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON) - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland- Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fish varies among species. This necessitates the collaborative invo lvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.		Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -	
	Research and Education	1610	10/26/2011	Restoration of Oyster Habitats in Point aux Chenes Bay in Eastern Jackson County, Mississippi, within Grand Bay National Estuarine Research Reserve	(ORIGINAL ID#11425) A cooperative, federal, state, and private project to restore the Point aux Chenes Bay ecosystem and its historic oyster habitats through: 1. The rebuilding of the Grand Batture Islands with sediments maintenance-dredged from nearby channels or Mississippi Sound (USA-COE); 2. The removal of sections of man-made levees along US H/W 90 & the CSX Railroad that restrict freshwater inflows into the bay (MsDOT & CSX); 3. The restoration of freshwater inflows to restablish proper estuarine conditions for oyster setting, survival, growth, & reef development; 4. The re-establishment of water-bottom conditions through planting of oyster shells and/or crushed concrete aggregate materials (by MsDMR); 5. The relaying & transplanting of live oyster stocks from Pascagoula Bay & Graveline Bayou by private oyster fishermen under the direction of MS-DMR; 6. The removal of upland sources of domestic & industrial watsewaters that now flow into Bayou Cumbest & Bangs Lake (by MsDEQ); 7. The reclassification of Point aux Chenes Bay & Bangs Lake as approved or conditionally-approved shellfish-growing waters (by MsDMR & USFDA); 8. The requirement that Mississippi Phosphate Company restore Bangs Lake to its pre-acid spill status including the funding of oyster restoration therein; 9. The re-imbursement of local oyster fishermen for assisting with oyster relaying & replanting in Point aux Chenes Bay & Bangs Lake; and 10.The re-establishment of commercial & recreational oyster fisheries in Point aux Chenes Bay, Bangs Lake, & in Bangs, Crooked, & Cumbest Bayous.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,500,000.00	$ -	
	Research and Education	1614	12/2/2011	Mississippi Invasive Plant Control Program-Congongrass Eradication Effort	(ORIGINAL ID#11538) Cogongrass (Imperata cylindrica) is an invasive, non-native grass, which occurs in the southeastern United States. A pest in 73 countries and considered to be one of the Top 10 Worst Weeds in the World. Cogongrass affects ecosystem survival, wildlife habitat, recreation, native plants, fire behavior, site management costs and more. Cogongrass is currently documented in 62 of the 82 counties in Mississippi and has become an extremely serious problem in MS Gulf Coastal Counties. Cogongrass negatively affects native ecosystems by creating a monoculture of itself wherever it occurs. It disrupts natural ecosystems and displaces native plant and animal species, including many listed as threatened or endangered, such as: the Gopher Tortoise, Black Pine Snake, MS Redbelly Turtle, Eastern Indigo Snake, MS Sand Hill crane, Red-Cockaded Woodpecker, Yellow-Blotched Map Turtle, Pondberry, and Louisiana Quillwort. Cogongrass creates extremely hazardous fire conditions for flora, fauna and humans. Due to it's high silica content, Cogongrass burns on the average four (4) times hotter than normal native fuel loads. Native ecosystems have evolved to thrive in normal pyric events. The hyper-intense fires of Cogongrass exceed the temperature level of normal environmental fires, thereby decimating native ecosystems and their inherent ability to recover and restore post-pyric biodiversity. Cogongrass also presents an economic strain to the already reduced economy of South Mississippi. It competes with all species of timber producing trees for nutrients and water, thereby reducing financial forestry growth rates. Even domestic live-stock growers are affected because Cogongrass is not palatable to cows or other livestock. Various agencies, both federal and state, have conducted Cogongrass control programs throughout the state. While these have been effective at suppression on a local basis, none has had the means to attempt eradication, in a systematic logistical manner in South Mississippi along the Gulf Coastal Counties most affected by Cogongrass. Therefore the Mississippi Forestry Commission is soliciting the Restore Program for aid. The focus of this project will be eradicating the non-native, invasive Cogongrass and restoring native ecosystems for the protection habitat for native flora and fauna. This is in turn will increase biologic diversity and both the inherent natural and economic value of Gulf Coastal ecosystems and forest. Proposal Objective: Identification/education/treatment program â€" Treatment of active cogongrass spots is very important in the suppression of this non-native plant species. With the average cost being $579 / acre for treatment, it is quite expensive and cost prohibitive for many landowners to fund treatment. All of the funding for this project will be used to fund treatment programs in Hancock, Harrison and Jackson Counties, MS. We will treat the small spots using MFC personnel. For larger areas, we will schedule treatments by contract vendor. An extensive database will be maintained, along with GIS shape files, of all infestations mapped and treated. Timeline: Five years from approval Budget: $10,000,000.00 Actions, Outcomes, Costs, Timeframe: â—¾Provide The MFC with $10,000,000.00 for cogongrass control activities through Landowner Assistance Programs â—¾Based on Mississippi Cogongrass Eradication Programs, it costs $579 per acre to control cogongrass. This funding would equate to controlling 17,271.16 acres of cogongrass in Hancock, Harrison and Jackson Counties, MS. Using the statewide average of 0.134 acres per infestation that would equate to treating 128,889 infested spots. â—¾The MFC will provide infrastructure for control, implementation, and outreach. â—¾Will include hiring contractors for spraying infestations â—¾May include hiring of part-time forest plant specialists	Hancock, Harrison, Jackson,George,Harrison,Jackson, Mobile,Hancock, Hancock,Stone,St Tammany,Mobile ,Jackson,Pearl River,Harrison,George	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 10,000,000.00	$ 300,000.00	
	Research and Education	1615	12/9/2011	Increase the pace, quality and permanence of voluntary land and water conservation through the Partnership for Gulf Coast Land Conservation	(ORIGINAL ID#11546) The Partnership for Gulf Coast Land Conservation project The Partnership for Gulf Coast Land Conservation (PGCLC) is a new coalition of local, regional state and national land conservation organizations devoted to advancing land and water conservation in the Gulf of Mexico region. This initiative is organized under the auspices of the non-profit Land Trust Alliance (Alliance) and is patterned after other successful land trust coalitions across the country. Today our membership consists of 25 national, regional and local land trusts operating in the Gulf States. The Partnership's mission is to work together across the five Gulf of Mexico states to increase the pace, quality and permanence of voluntary land and water conservation in the coastal region. Land trusts are community-based non-profit organizations that work with landowners to permanently conserve forests, rivers, farms, ranches and other natural areas critical to a sustainable environment and healthy, thriving communities. Through this project, the Partnership proposes to: 1. Increase the effectiveness and efficiency of land trusts in the Gulf Region. 2. Develop and promote a public policy agenda which will reduce the barriers to private sector conservation efforts and increase funding for acquisition and restoration. 3. Develop collaborative projects that will enable the land trust community and supporters to implement landscape scale conservation measures in the region. Collaborative projects may be built around water quality, critical habitat, or other criteria. 4. Participate in landscape-scale conservation planning in collaboration with other conservation partners (resource agencies and other non-government organizations) that prioritizes habitat for endangered and threatened species, improvements to water quality, connectivity to other protected lands, trust resources and important cultural and recreational features. 5. Participate in and coordinate our efforts with other ong oing conservation planning and implementation activities through entities such as the Gulf of Mexico Alliance and the Gulf of Mexico Foundation and others.	n/a	Yes	No	No	No	No	Yes	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	1623	7/2/2012	Enhancing Remnant Wetlands to Decrease the Impacts to Coastal Degradation	(ORIGINAL ID#11717) The TNC-MS Chapter's Freshwater Program proposes to implement controlled drainage practices on remnant oxbow wetlands in the Mississippi Delta. While serving as a drainage catchment, installation of an innovative surface controlled drainage strategy, low-grade weir, in the systems outflow channel would create a series of in-stream wetlands with in the systems channel. These in-stream wetlands will aide in altering flow velocities of runoff entering these remnant systems and provide the very important service of first flush capture of nonpoint source pollutants that would have eventually exited the system. These pollutants are derived from the agricultural production in the region that is ubiquitous in its use of inorganic fertilizers to increase crop yields, which in turn, often result in the delivery of high nutrient loads from the landscape to adjacent receiving waters. It is these nutrient loads, mainly nitrate-N, associated with these watersheds that are rooted deeply in the causes of coastal ecosystem degradation and eutrophication. This is no more prevalent than in the hypoxic zone off of the Mississippi coast in the Gulf of Mexico. Several thousand acres of remnant oxbow wetlands in the Mississippi Delta currently go unmanaged. These systems could significantly contribute to decreasing nitrate-N concentrations and loads reaching Mississippi's coastal ecosystem while also serving as a critical significant surface water source capable of providing sustainable irrigation supplies as well as needed in stream flows. Using remote sensing data through the Light Detection and Ranging (LiDAR) software we were able to determine precise water volumes associated with water elevation fluxes of several remnant oxbow wetland systems. Two of the systems alone would have a combined water storage capacity of 1,500,000,000 liters following implementation. Project sites would be modeled and replicated for future projects of its kind aimed at enhancing water quality and sec uring an additional sustainable water supply in the Delta's watersheds by using the landscape's natural features. The project is in the preliminary stages and although we have a strong consensus from the private landowners, the most important steps include securing funding for the project and potentially leveraging that funding with other interested partners. Project sites range from the northern to southern portions of the Mississippi Delta region and are dependent on funds allocated. Funds from the Restore Act would aide in enhancing critical wetland habitat to decrease the impacts to downstream water quality, with the added potential to provide data that would establish these remnant wetlands as an additional sustainable water supply that could be managed and is needed in this region's irrigation-dependent agricultural economy. The agriculture community has begun to embrace the notion of water resource conservation, but alternative strategies are actively being sought. Failure of the conservation community and associated partners in this region to engage in this process will represent a lost opportunity with wide ranging implications.	n/a	Yes	No	No	No	No	Yes	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	1625	10/16/2012	Enhancement of the existing DMR Smart Growth and Sustainability Model Utilizing Geographic Information Systems (GIS) Technology and Coast-Specific Data for the Lower Three Coastal Counties (Hancock, Harrison and Jackson Counties)	(ORIGINAL ID#11835) The Mississippi Department of Marine Resources (DMR) is pleased to provide this proposal to develop an enhanced smart growth and sustainability model for the lower three coastal counties (Hancock, Harrison and Jackson Counties) and the cities and communities within the three lower counties utilizing the latest GIS technology and coast-specific data. DMR proposes to complement and enhance on-going DMR/DEQ coastal restoration efforts by providing a tool for use by local governments, private interests, and the general public that will identify and highlight opportunities for continued smart growth and sustainable development in coastal Mississippi. We envision this as being a phased project, with the first phase focusing on the model development for the three lower coastal counties, and as funds are available, DMR hopes to expand the model to include Pearl River, Stone and George Counties in the future. In summary the model will include the following: - Enhancement of the existing Smart Growth and Sustainability GIS Model through the incorporation of additional existing data sets and creation of new data sets designed to provide local stakeholders with a decision making tool to assist with growth and development in Coastal Mississippi; estimated cost: $1,750,000. Introduction: In December 2009, the Office of Coastal Management and Planning (CMP) of the Mississippi Department of Marine Resources (DMR) hired Eco-Systems and began development of a series of tools designed to provide coastal Mississippi with the necessary resources to make informed decisions with regards to growth, development, environmental restoration, and resiliency. With Smart Growth and Sustainability as the guiding principles, Eco-Systems and CMP worked to develop an internet-based Smart Growth and Sustainability Toolbox for coastal Mississippi. The primary principles of Smart Growth encourage: - Development that includes a compatible mixture of land uses, - A focus on compact building design t o maximize density where appropriate, - Creation of a range of housing opportunities and choices, - Creation of walkable and pedestrian-friendly neighborhoods and business districts, - The creation of distinctive and attractive communities with a strong sense of place, - Preservation of open space, farmlands, natural beauty, and critical environmental areas, - Development directed towards existing communities to take advantage of existing infrastructure and to reduce urban sprawl, - A variety of transportation choices, - Policies that make development decisions predictable, fair, and cost effective, and - Community and stakeholder collaboration in development decisions. The Coastal Mississippi Smart Growth and Sustainability Toolbox and the GIS Smart Growth Model condensed these ten principles into five primary concepts designed to illustrate existing smart growth and sustainable developments and to encourage new developments to follow suit. These concepts include: - Community Character, - Transportation Choices, - Resiliency and Natural Hazards, - Policy in Practice, and - Growing Green. The GIS Model, as it currently exists is a raster-based model that includes a number of data-sets from the six coastal counties. These data-sets combined, provide a tool for the user to identify areas of existing Smart Growth and Sustainability and also allow the user to identify Smart Growth and Sustainability elements in the coastal communities that may be enhanced by projects that seek to further the goals and objectives of Smart Growth. The data-sets currently incorporated into the existing model include: - Public Transportation including the Coast Transit Authority (CTA) routes and stops, - Areas certificated for water and wastewater infrastructure through coastal utility districts and authorities, - Historic and National Register Districts, - Municipal, community, and county boundaries, - Cultural Resources including parks, playgrounds, public areas, churches, schools, museums, etc., - MDEQ designated Brownfields sites, - Beachfront properties, - Jurisdictional wetlands, - FEMA-Designated Flood Zones, - Land parcels and building footprints, and - Government-owned lands. In development of the Model, each data-set was converted from vector to raster data, enhanced with buffers and assigned a value to be incorporated into a global formula to determine areas with high potential for smart growth and sustainability related development. The formula creates a ranking from 0 to 10 with 0 being the lowest ranking and 10 being the highest. The combination and layering of data-sets allows for a weighted score of all areas within the six coastal counties and the formula moderates this weighted score to ensure that all areas are potentially balanced with respect to positive and negative measures of smart growth and sustainability. The expansion project, as proposed, will enhance and expand the existing model to enhance the Smart Growth aspects of the model. The proposed Model enhancement project will provide additional benefits to include: - A single repository of relevant and critical GIS data housed in on-line servers that will be available to local governments, businesses, individuals and others for use in future emergency and disaster recovery	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,750,000.00	$ -	

	Research and Education	1626	10/24/2012	A Gulf-wide multi-year research project to determine best practices for minimizing barotrauma effects on red snapper following capture and release	(ORIGINAL ID#11840) Proposed Restoration Project: The project would clarify the effects of barotrauma on red snapper and better define expected rates of discard mortality in the Gulf of Mexico. Additionally, the project wil determine, through stakeholder involvement, methods and devices best fit to increase post-release survivorship of red snapper in Gulf fisheries. A detailed understanding of barotrauma and its effects on red snapper will inform efforts to help the recovery of fish populations impacted by the Deepwater Horizon (DWH) oil disaster. Link to Injury: The DWH oil disaster footprint overlapped with portions of the geographic range and spawning period of many reef fish species, including red snapper (Lutjanus campechanus). The eggs and larvae of red snapper and other finfish spawning at the time, in addition to adult fish, were exposed to petroleum hydrocarbons and chemical dispersants. Acute mortality of fish eggs and larvae and sublethal effects on adult fish could affect year class strength and population levels. Benefit and Rationale: Red snapper is an iconic and popular recreational and commercial fish species in the Gulf. In 2011, commercially landed red snapper had an ex-vessel value of $11.5 million. The recreational fishery generates millions of dollars as well. Red snapper are known to suffer from barotrauma related injuries and mortality. Barotrauma is the condition that results when a fish is brought up from depth rapidly and the change in ambient pressures can cause potentially lethal internal injuries. Most red snapper barotrauma studies have been regional , and have not encompassed the full geographical, depth and temperature ranges in which the red snapper fishery is prosecuted. Increasing the post-release survival rate of red snapper Gulfwide would reduce the impacts of fishing and allow the population to recover from the DWH injury. Description: Red snapper are susceptible to barotrauma. Barotrauma can cause internal injury (e.g., gas bladder rup ture, hemorrhaging, etc.) and positive buoyancy (i.e. floating). These injuries may not allow the fish to return to depth upon release or cause behavioral effects that can increase the risk for predation. Mortality caused by barotrauma hinders rebuilding of overfished populations of red snapper and could deter recovery from DWH impacts. Overall, fishery managers lack data on the post-release mortality of many reef fish species, including red snapper. This prevents accurate prediction of discard mortality in commercial and recreational fishery harvest estimates and stock assessments. Lack of confidence in release mortality may lead to increased management uncertainty. Accurate prediction of post-release survival is integral to setting appropriate annual catch limits of affected species in order to meet conservation goals. This project barotrauma would follow the established protocols (e.g., Jarvis and Lowe) , modified as necessary for red snapper, for both field (e.g., cages, release devices, etc.) and laboratory procedures (e.g., hyperbaric chambers and underwater acoustic tags). In general, these protocols focus on and characterize internal/external signs of barotrauma, physiological status, and short/long term post release mortality of the species. Stakeholder participation will define their needs and will assist in development of best release practices for this species. Preliminary studies have demonstrated recompression devices have great potential to increase fish survival from barotrauma related injuries. Though promising new methods are available to fishermen, including recompression devices (e.g. Seaquilizer , Shelton Fish Descender , etc.), information of their real world applicability has yet to be determined in great detail. Identifying recompression devices most effective at reducing post release mortality and determining the ones best suited to anglers through active involvement of stakeholders will guide outreach efforts to increase their accepta nce and use among fishermen. This is especially important for those species affected by the DWH disaster, potentially offsetting DWH impacts by allowing these populations to recover at a faster rate than if these devices went untested and unused. Results of this research project will add to the state of knowledge regarding methods of survivability for reef fish species. Data derived from this pilot study will help managers determine tools that can aid the recovery of red snapper populations impacted by DWH and are suitable for wider use in Gulf of Mexico fisheries. These data will also increase the accuracy of discard mortality estimates and improve annual catch calculations. This project could generate signficiant support and interest in the recreational fishing community. Location of Project: To be determined, but likely in multiple Gulf of Mexico locations (depending on fishermen interest)	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	1629	3/20/2013	Mississippi Watershed Structure Restoration Project	(ORIGINAL ID#11936) 1) BACKGROUND OF RC&D PROGRAM -The North Central Mississippi Resource Conservation & Development Council (NCRCD) covers 10 counties in North Mississippi. The NCRC&D is a 501 c3 non-profit organization made up of volunteers who identify needs in our communities and find solutions that work. Our Council's sponsors are the Board of Supervisors and Soil & Water Conservation Districts. 2) NATURAL RESOURCE DAMAGE- The NCRCD recognizes the need to fund a project to restore or rehab approximately 77 watershed structures that are near failing. Most structures will require new pipes installed, dirt work, and woody vegetation removed from these dams. These water control structures were built in the late 1950s-1960s by USDA, Soil Conservation Service along deep channels for erosion control purposes. Over the past 60 years they have trapped tons of nutrients and sediment. Not if, but when these structures fail, sediment and nutrients will pollute streams on down to the Gulf of Mexico. 3) EXECUTIVE SUMMARY- Goal is to restore or rehab 77 water control structures back to original designs in Mississippi watersheds that include: Little Tallahatchie, Coldwater, Horn Lake-Nonconnah, and Wolf River. The NCRCD is capable of administering this project. 4) ACTION PLAN -The NCRCD will be responsible for project coordination and seeing that the project is completed in a timely and efficient manner. The action plan includes the following: A) NCRCD and Watershed District or local sponsor will obtain easements B) USDA- Natural Resources Conservation Service will provide as-built plans (designs already completed) and will provide personnel to inspect the rehab of structures as matching funds for the project C)NCRCD will provide assistance in obtaining copies of as-built-plans, bid advertisements, bid packages, contracting, payments, and final reports D)NCRCD will provide sub-grants to local organizations and/or certified engineers if needed. 5)BUDGET- A) 77 Water Control Structures Restored ($2 ,475,000) B) Project Coordination - Easements, Contracting, Misc. Engineering ($200,000) C) Travel($15,000) D)NCRCD- 4% Administrative Fee ($107,000) E)In-Kind Matching Funds USDA-NRCS($450,000) 6) EVALUATION OF PROJECT- A)Number structures restored B)Efficiency & timeliness of project completion C) Reduction of sediment and nutrients into the Gulf of Mexico.	Panola	Yes	No	No	No	No	Yes	Yes		No		$ 2,797,000.00	$ 450,000.00	
	Research and Education	1630	3/20/2013	Mississippi On-Site Wastewater Treatment Project	(ORIGINAL ID#11937) 1) BACKGROUND OF RC&D PROGRAM -The Mississippi Association of Resource Conservation & Development Councils (MARCDC) has 7 local Resource Conservation & Development (RC&D) Councils that cover the entire state of Mississippi. The MARCDC & RC&Ds are 501c3 non-profit organizations made up of volunteers who identify unmet needs in their communities and create solutions that work. 2) NATURAL RESOURCE DAMAGE- The MARCDC recognizes the need to fund a statewide project to address environmental damage caused by rural homeowners with failing septic tanks & homes without septic tanks (straight line pipes) to protect upstream damage from polluting streams that drain into the Gulf of Mexico. According to the Mississippi Department of Health(MDOH), 425,000 homes or 40% of homes are not connected to sewer systems located in rural areas of the state. A MDOH official estimated 15-20% of rural homeowners statewide have failing septic tanks or without septic tanks. 3) EXECUTIVE SUMMARY- Goal is to install a minimum of 200 wastewater treatment systems in existing low-income households within rural areas of MS. The MARCDC is capable of administering this project. Plan is to give sub-grants to local groups such as; RC&D Councils, Conservation Districts, Health Dept. Boards, and other community groups. 4) ACTION PLAN -The MARCDC will make sub-grants to local organizations to allow septic tanks to be installed in a timely and efficient manner. Local organizations will work with local health departments to complete these activities; A) homeowner completes application B)health department determines homeowner eligibility rating ()health department makes on-site evaluation & system type needed D)eligible homeowners receives septic system maintenance training E) groups of at least 5 septic tanks will be advertised in the local newspaper F)mailletter to eligible homeowners G)open bids and award contracts to certified contractors H)health dept. certifies work meets standards. 5)BUDGET- A) 200 Se ptic Tanks installed ($1 ,000,000) B) Project Coordination- Local Organizations ($160,000) C) MARCDC- 4% Administrative Fee ($46,400) 6) EVALUATION OF PROJECT- A)Number of septic tanks installed B)Efficiency & timeliness of project completion ()Reduction of fecal coliform bacteria into the Gulf of Mexico.	Tate	Yes	No	No	No	No	Yes	Yes		No		$ 1,206,400.00	$ -	
	Research and Education	1631	3/27/2013	10-Year enhancement for improving Gulf of Mexico Sea Turtle Stranding Network response and science capacity	(ORIGINAL ID#11947) Proposed Restoration Project: The project will augment resources available to the Sea Turtle Stranding and Salvage Network (STSSN) in the Gulf, led by NOAA, and help participating entities respond to and learn from future sea turtle strandings and thus increase the survival of rescued animals and the recovery of populations impacted the Deepwater Horizon (DWH) oil disaster. Link to Injury: Sea turtles were exposed to petroleum hydrocarbons resulting from the Deepwater Horizon oil disaster and likely to chemical dispersants used during DWH response. More than 450 visibly oiled, live sea turtles and 18 visibly oiled, dead sea turtles were recovered during DWH response from April 2010 through February 2011. Another 500+ stranded sea turtles with no visible external signs of oiling were also reported during this period. Animal autopsies revealed that the cause of death for a subset of non-visibly oiled sea turtles was consistent with drowning, but whether and how the DWH disaster contributed to strandings of non-visibly, dead sea turtles remains under investigation. Benefit and Rationale: NOAA leads the STSSN in the Gulf of Mexico, but depends on employees of federal and state agencies, universities, non-governmental organizations to run on-the-ground operations and foot response. In some cases, STSSN participating entities receive limited or inconsistent institutional support and conduct STSSN activities using their own limited time and funding. However, they are often the first to respond to sea turtle strandings, a key function in maximizing the survival of live-stranded animals, and could do more with dedicated funding to help support monitoring and response to strandings. Since April 2010, the number of sea turtle strandings in the northern Gulf has approached 2,000 animals, far exceeding the historical average. Stranded sea turtles would not be located, rescued and rehabilitated were it not for the Network and the participating organizations. Rehabilitat ed animals released back into the wild are given another opportunity to reproduce and thus contribute to the recovery of populations impacted by episodic events like the DWH disaster. Sea turtles, among other species, are the ocean?s ?canary in the coal mine,? and stranding networks, through tissue sampling or post-mortem exams, collect valuable information on the condition of animals that can not only help scientists understand the cause of illness or death but detect subtle or significant changes in ecosystem condition or function. The collection of biological information from stranded animals is critical to understanding more clearly the long-term effects of the DWH disaster and other human activities on Gulf sea turtles. Description: This project would increase capacity for sea turtle stranding programs at the state or regional level such that they are in a better position to respond to strandings, maximize survival of recovered animals, and improve the consistency and quality of pathological information collected from tissue samples or post mortems. Specifically, this project would increase capacity across Gulf STSSN programs in the field by making investments in the following operational areas: 1) developing and implementing uniform animal detection and data collection methods; 2) equipment (including vehicles); 3) supplies (including fuel); 4) collection, banking, shipment and analysis of samples (necropsies); 5) data entry, management and synthesis for scientific use and public consumption and 6) rehabilitation facilities (including salary support and other administrative costs such as coordination with other networks and resolving permit problems). In regards to #1, this project would cover the cost of developing uniform animal detection and data collection methods, which are important for understanding how stranded turtles represent the entire population. Hiring experienced researchers and veterinarians from other regions to train local responders in th e activity of collecting information from stranded animals is needed to ensure that information collected from stranded animals is consistent across stranding networks in the Gulf, integrated with other health assessment studies, contributes to a better understanding of the impacts of the DWH disaster on Gulf sea turtles, and informs sea turtle recovery strategies going forward. Note: Specific program needs will vary on a state by state basis and therefore should be determined by in-state coordinators. Note: This proposal was prepared by Ocean Conservancy, with input from stranding network members. Ocean Conservancy is not s seeking funding for this project, nor does it anticipate receiving funds, if approved and adopted in whole or in part, by the Trustees, the Gulf states, the National Fish and Wildlife Foundation, the Restore Council, or any other funding entity.	n/a	Yes	No	No	No	No	Yes	No		No		$ 1,000,000.00	$ -	
	Research and Education	1634	4/30/2013	Flood Water Retardation Watershed Structure Rehabilitation	(ORIGINAL ID#11969) We have a need to renovate and bring back up to standards flood water retardation watershed structures. These dams were build in the 1960-1970 time period to reduce down stream flooding and control erosion. These structures are still functioning in that capasity but the metal trash racks are in need of replacement. These dams have and are still providing a great service in controled runoff of sediment, water and nutrients from towns and agricultural lands. Because of the rusting of the metal trash racks and some woody vegetaion on emergency spillways, the local watershed districts are in need of financial assistance to conduct this type of maintenance. These local watershed districts do carry out some annual maintenance but are not financially able to preform these type of overhauls. If these dams are not brought back up to current mandated standards, these dams would be breached allowing the 40-50 years of trapped sediment, nutrients and possible pesticides to be released into the down stream waterways. And the increased flood hazard would indanger many homes, businesses and highways, railroads, utility services, wetlands and agricultural lands. These watershed areas all drain to the Gulf of Mexico by way of the Tombigbee River. The areas above these dams have created wetlands that are important to local wildlife and migratory birds.	Prentiss, Lee, Alcorn, Tishomingo, Chickasaw, Calhoun, Webster	Yes	No	No	Yes	No	Yes	Yes	10	No		$ 400,000.00	$ 40,000.00	
	Research and Education	1636	5/16/2013	Reduction of Nutrients and Sediments from Agricultural Lands	(ORIGINAL ID#11976) This project would involve landowners with livestock on land ajacent to field ditches, creeks, streams and waterways to reduce the amount of nutrient and sediments entering the stream flow. This would involve assistance to landowners with fencing out of streams, improvements to pasture grass conditions, water sources, feeding areas, grazing rotations and educational meetings to assistance landowners in best management practices and to learn about other sources of funding. This project would reduce the amount of nutrients and sediments entering the waters that flow into the Tombigbee river basin and then the Gulf of Mexico. This would be administered through the NE Miss. RC&D with the assistance of the local Soil and Water Conservation Districts and Miss. Soil and Water Conservation Commission and the Natural Resources Conservation Service office.	Alcorn, Tishomingo, Lee, Itawamba, Prentiss, Chickasaw, Calhoun, Clay, Monroe, Lowndes, Oktibbeha, Webster, Choctaw, Noxubee, Kemper	Yes	No	No	No	No	Yes	Yes		Yes		$ 1,750,000.00	$ -	
	Research and Education	1637	5/16/2013	Wetlands use as nutrient traps	(ORIGINAL ID#11977) This project would be use to reduce nutrients in stream waters by directing waters from grazing and croplands into created wetlands. This project would assisted interested landowners in the creation 1 to 15 ac. size wetlands with flash board rier type water control sturctures to regulate water levels and provide still water areas to settle nutrients and sediment from near by agricultural lands. Open areas would be planted to plants favored by water fowl and aquatic wildlife. Assistance would be provided for planning, engineering, construction and management of these areas as well as education for long term management long after this program ends.	Clay, Oktibbeha	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 110,000.00	$ -	

	Research and Education	1638	12/31/2014	Capacity Building, Disaster Preparedness, and Sustaining Fishing Communities in the Gulf after the BP Oil Spill	(ORIGINAL ID#11987) In the wake of the interconnected cultural, socio-economic, and environmental effects of the BP Oil Spill, Gulf fishing communities are facing unprecedented short- and long-term challenges in sustaining their traditional lifeways. Our two years of ethnographic research investigating traditional cultural communities and properties in the Gulf during the BP Oil Spill and response efforts has demonstrated the intimate and vulnerable cultural relationships these communities have with their surrounding environments. This research also illustrated the need for more inclusivity of fishing community traditional ecological knowledge (TEK) in implementing innovative capacity building strategies and the development of effective conservation and sustainability plans. McGoodwin (2001) has importantly pointed out that: Over the course of its development, much of fisheries-management science, both in theory and in practice, has had a misplaced emphasis. Whereas its first concerns should have been the human beings who utilize fisheries resources, its cornerstones were instead?the conservation of important marine-biological species?[and] allocating fisheries resources and maximizing the economic benefits from them. The aftermath of the BP Oil Spill has particularly elucidated the need to emphasize and better understand the human aspects of fisheries and the roles fishing communities play in producing and promoting sustainable fishery environments. In this context and in conjunction with mandates presented by the Magnuson-Stevens Act and National Standards 8 regarding the need for fishing community consideration in fishery conservation and management decision making, this proposed project seeks to establish capacity building strategies inclusive of fishing community perspectives, values, beliefs, and TEK in: (1b) the development of community sustainability and management plans; (1c) the creation of fishery conservation networks; and (1d) the development of inter-generational and ent ry level access to and inclusion in fisheries. Methods: Participatory Learning and Action (PLA) is a method that promotes community interfacing and provides a vehicle for people to share, discuss, and expand their knowledge related to particular contexts and situations as well as to effectively prioritize, monitor, plan, and act at the community level. With each participating fishing community, the project team will organize a PLA workshop by collaborating with community members, educational institutions, and other local institutions. The workshops will be held in public facilities (where possible) at times most convenient for fisher communities and will extend over the course of three days. These workshops will provide structured as well as open interactive forums and activities where communities can present their concerns and needs, identify solutions to meet those needs, and develop community action plans and best practices related to sustainability and management programs; the creation of fishery conservation networks; and the development of intergenerational and entry level access to fisheries. The process of working in partnership with fishing communities to develop inclusive, feasible, desirable, and sustainable programs will contribute to innovative capacity building strategies that can aid the short- and long-term interests and needs of these communities in confronting the conservation and sustainability management challenges as well as the social and cultural impacts of the BP Oil Spill. Project Outcome(s): Anticipated short-term outcomes of the PLA workshops include: 1) wider community participation in capacity building activities, 2) community specific fishery TEK exchanges that can help strengthen capacities of communities to identify local fishing community needs, build community consensus, and develop appropriate strategies to meet those needs, 3) the development of culturally informed fishing community sustainability plans, and 4) establishment of Fishing Community Sustainability Planning Committees. Each of these steps will help initiate community ownership of sustainable and conservation planning processes and help build local accountability. Long term utility of this project will help integrate local fishing community needs and perspectives into management and conservation strategies related to the BP Oil Spill and response and will help meet goals established by the Magnuson-Stevens Act and National Standards 8 mandating consideration for the impacts of conservation and management practices on fishing communities. It will also provide baseline data of the management challenges related to the BP Oil Spill as well as present a path forward for future research needs regarding the integration and use of fishing community perspectives and TEK into conservation and sustainability strategies outlined in the Magnuson-Stevens Act and National Standards 8. Proposed Activities: The project team has two years of experience working directly with the fishing communities listed above. The tasks necessary for identifying community stakeholders, building trust, and developing working relationships have already been established. The following are the steps the project team will take to	n/a	Yes	No	No	No	No	No	No		Yes		$ 2,500.00	$ -	
	Research and Education	1639	6/17/2013	Coastal Ecosystem health: American Oystercatcher as an indicator of exposure and effects of pollutants on breeding birds on the Gulf Coast	(ORIGINAL ID#12003) The Gulf Coast of Mexico is one of the most important regions in North America for bird-watching and outdoor activities. Bird conservation along the Gulf Coast is of primary importance because it contributes to the conservation of natural resources but also because it provides economic incentives to the coastal communities by increasing tourism, including bird-watchers and nature lovers to the region. Thus, maintaining healthy bird populations along the coast is important from an economic and ecological standpoint. Fish-eating birds are at the top of the food chain and often accumulate more contaminants than other species at lower trophic levels. American oystercatchers feed on bivalves which are also consumed by humans. This study could be used to assess general ecosystem health and potential impacts of contaminants in bivalves on human health. This research project will address the impacts of environmental contaminants on aquatic birds breeding along the Gulf Coast, using the American Oystercatcher (Haematopus palliatus palliatus) as an indicator species. Coastal wetland areas, estuaries, and islands along the Gulf of Mexico coast constitute a primary nesting and feeding ground for many North American birds. Most of the species nesting on these areas are waterbirds which nest in colonies and feed on aquatic vegetation, invertebrate organisms, and fish. Exposure to environmental contaminants in these species can occur through the diet, but also directly through dermal absorption, preening, and inhalation. To our knowledge, up until now, there has not been a complete assessment of the potential impacts that environmental contaminants in the Gulf of Mexico could have on many aquatic birds, including species of special concern and in need of protection. The results of this research can also be used to determine the health of coastal areas and their potential associated impacts on other species of concern, i.e. fish, shellfish, and humans.	n/a	Yes	Yes	No	No	No	No	No		No		$ 4,800,000.00	$ 300,000.00	
	Research and Education	1640	6/17/2013	Conservation and evaluation of limiting factors for American Oystercatchers along the Gulf Coast	(ORIGINAL ID#12004) The American Oystercatcher (Haematopus palliatus) is the most widely distributed of the four oystercatcher species found in the Western Hemisphere with a range stretching from the northern U.S. Atlantic Coast to the tip of South America. The total population is estimated to be 43,000 with the subspecies found in the U.S. (H.p. palliatus) making up 20,000 of that total. The U.S. population is estimated to be 11,000. American Oystercatchers are restricted to the narrow band of the coastal zone throughout their range where they feed mainly on oysters and other bivalves. The threats to their survival are many and include a low overall population size, low reproductive success, and delayed breeding (3+ years of age). Productivity rates from the Atlantic Coast range from .30 to .50. Nests are subject to a whole host of mammalian, avian, and even reptilian egg and chick predators and are also subject to overwash from high tides and tropical storm events. Chicks can starve to death during high tide events when the adults are unable to find enough food. Because oystercatchers nest in the coastal zone, disturbance from human recreation is common and exacerbates other natural threats. Sea level rise is major threat to oystercatcher survival. The U.S. Shorebird Conservation Plan lists the American Oystercatcher as a species of high concern, it is a National Fish and Wildlife Foundation (NFWF) priority species, and it is included on the list of Texas Parks and Wildlife Department?s priority species. The majority of projects associated with the American Oystercatcher have been along the Atlantic seaboard with limited focus on Gulf Coast populations. In 2011, the Gulf Coast Bird Observatory embarked on a multi-year study to fill information gaps on Gulf Coast oystercatchers. We have learned much from our work so far but there are still many unknowns. We have only begun to scratch the surface of understanding of oystercatcher conservation however as there remain many unanswered qu estions. Our primary focus would be to determine how and why eggs go missing from nests and how vegetation aids in chick survival. It appears the vegetation provides chicks with critical refugia from predation but we do not have a complete picture of what type of vegetation works best. We propose to expand oystercatcher nest monitoring throughout the Gulf to determine if other Gulf oystercatchers have similar productivity and threats as Texas oystercatchers. We propose to deploy motion activated video cameras to capture egg predation events and determine without question what is causing them so that we can counteract this with appropriate conservation measures. Thirdly, we propose to conduct a detailed vegetative analysis of oystercatcher nesting islands to determine which type of vegetation provides the best chick refugia. Without this information we cannot successfully create more oystercatcher nesting habitat.	n/a	Yes	No	No	No	No	No	No		No		$ 5,800,000.00	$ -	
	Research and Education	1642	7/11/2013	Management Strategy Evaluation Model (MSE) to develop improved management strategies for fisheries and shellfisheries resources of Mississippi	(ORIGINAL ID#12026) An MSE is a complex model designed to provide a vehicle to test, through numerical simulation, a range of management options and to evaluate the influence of those options on the target species (e.g., oyster, red snapper), the fishery, and the shore-based business community. An MSE contains a series of modules: (a) a population dynamics module for the stock, (b) a metapopulation module describing recruitment dynamics, (c) a survey module, (d) a management module containing the assessment process and regulatory decision making process, (e) a module describing the fishing process including vessel characteristics and fisherman/Captain behavior, (f) an economic model describing the economics of the fishery itself, and (g) a shore-based infrastructure model describing the economics of the business community supporting the fishing enterprise. MSEs are becoming more frequently implemented when challenges from, for example, climate change or anthropogenic insult (e.g., oil spills) require re-evaluation of management approaches and regulatory reform. Examples include king mackerel, surfclam, and summer flounder. The MSE developed for surfclam has the important characteristic of being coded into a general form adaptable for many applications. This MSE will be developed into a form usable for a range of fish (e.g., red snapper) and shellfish (e.g., oyster) species. In the course of this process, important information on the economics and sociology of the fishing enterprise will be obtained that will provide an important database to guide further development of recreational fishing as part of a comprehensive approach to improving the tourism industry of coastal Mississippi.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 2,500,000.00	$ -	
	Research and Education	1643	7/11/2013	Economics and The Gulf Coastal States	(ORIGINAL ID#12028) The Objective is to have data that will capture the value of our Gulf of Mexico States seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the product harvested throughout the entire seafood supply chain, but the also calculate the economic value to regional businesses benefitting from Gulf seafood. The outcome is to have a social and economic survey that will help capture our value of the commercial seafood industry to the Nation as a whole. Presently this data does not exist. We do not have the necessary data for these type of multiplier to be include into our Economics. This will help us prove to our leaders in congress our economic and social value to the Nation.	n/a	Yes	Yes	No	No	No	No	No		No		$ 5,000,000.00	$ -	
	Research and Education	1644	7/12/2013	Monitoring ecosystem health in northern Gulf of Mexico by assessing habitat biodiversity using parasites of fishes as indicators	(ORIGINAL ID#12030) Parasites are ubiquitous and abundant in any healthy ecosystem and absent or rare in a disturbed or sick environment because they have complicated life cycles with multiple stages, each requiring different free-living hosts for completion. Consequently, parasite diversity and abundance in a habitat may be used as a proxy for overall diversity. The proposed study uses fish parasites to investigate long-term maintenance of biodiversity in the northern Gulf of Mexico (GOM). Parasite assemblages of several important t fish species will be monitored and outreach will be fostered through education and training of undergraduate and graduate students. The parasite assemblages of the gulf killifish (estuarine species), and the Atlantic croaker, (coastal species), will be assessed over a period of 5 years and data on presence and abundance of parasite species will be compared with historical data from these hosts from off Mississippi collected between 1970 and 2012. Additionally, Parasite assemblage data will be collected from coastal and GOM pelagic fishes (tunas, mackerels), reef fishes (snappers, trigger fishes) to identify baselines and trends. Thirdly, a college-level course (Parasites as Indicators of the Environment) will be developed for USM, Department of Coastal Sciences (Summer Field Program) which will train students and produce data for the presently proposed project. Establishment of the course would enable the continued collection and expansion of established datasets indefinitely beyond the 5 year project deadline.	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,225,000.00	$ -	
	Research and Education	1645	7/12/2013	Establishing Institute for Biodiversity Studies at the GCRL	(ORIGINAL ID#12031) An Institute for Biodiversity Studies will be created with the purpose of conducting long-term ecological studies of wildlife in the lower Pascagoula River and associated estuary. The institute will be housed at the GCRL or Cedar Point Campus and will unite and house the GCRL Museum vertebrate and invertebrate collections in a new visitor friendly facility. The Institute will also facilitate research projects from outside agencies, collaborate with the Pascagoula River Audubon Center, and serve as a repository for specimens collected associated with the Audubon All Taxa Inventory Initiative, as well as continue to serve in its regular capacity as a premier regional lending repository for marine specimens from the Gulf of Mexico. The institute will provide taxonomic training and guidance to USM Coastal Science graduate students, contribute to the USM Marine Education Center Summer Program, and employ undergraduate students interested in museum and ecosystem- based studies. The institute would make a logical home office for the Gulf and Caribbean Reports.	Jackson	Yes	No	No	No	No	No	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	1653	8/7/2013	Enhancement of IMMS Public Outreach and Education Programs	(ORIGINAL ID#12066) The events surrounding the Deepwater Horizon oil spill stressed the need for having a well-informed citizenry regarding marine conservation and restoration. A key to this goal is to support education and outreach programs whose mission is to teach the public about the great natural resources of the Gulf of Mexico. The Institute for Marine Mammal Studies ? Center for Marine Education and Research (IMMS-CMER) is a premier marine education and conservation facility that offers a variety of educational programs designed to meet the academic and outreach needs of multiple audiences on educational topics including marine mammals, sea turtles, fish biology, marine invertebrates, threatened/endangered species, invasive species, point and non-point pollution, marine habitats, and water quality. Our current educational programs consist of: - Student camps that provide hands-on exploration of coastal wetlands, beach and barrier islands, birding, and fisheries, - Academic field-trips designed to familiarize students with the plants, animals, habitats, and processes of marine and aquatic environments tailored to the visiting age group, - Teacher Workshops provide teachers with opportunities to expand their knowledge of coastal issues and provide a venue for teachers to earn continuing education units (CEUs) or college credit, and - College field courses that expose students to applied marine science and marine mammal and sea turtle rescue and rehabilitation. IMMS seeks to continue and enhance current educational and outreach programs while actively engaging in development of new programs to educate the public. These include: - Ecotours to provide unique, hands-on field experiences - Technology labs to introduce students to modern research techniques - Exhibit enhancements for our public Discovery Room facility - Outreach capabilities for community festivals and events Investing in public education regarding marine conservation issues will contribute to the ultimate goal of a restored and healthy Gulf of Mexico for generations to come. IMMS is committed to fostering a sense of appreciation and stewardship for the great coastal and marine resources in Mississippi and the Gulf of Mexico for those young and young at heart.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 3,000,000.00	$ -	
	Research and Education	1655	8/11/2013	Greenhouse for Producing Restoration Nursery Stock	(ORIGINAL ID#12070) Many current and future restoration projects along the Mississippi Gulf Coast will have need of quality nursery stock of native dune and marsh plants. Currently, large projects in Mississippi must purchase plant stock from nurseries in other states (usually Florida). The genetic provenance of these plants is usually hundreds of miles away from the project where the plant material is needed. We propose to construct a greenhouse at the Lake Thoreau Environmental Center (LTEC) in Hattiesburg, MS to serve as a facility to produce quality, locally-grown nursery stock for Mississippi restoration projects that require installation of native plant species. Currently, no such facility exists in Mississippi. There is a small greenhouse located at the Gulf Coast Research Laboratory in Ocean Springs, MS but it is not large enough to handle the capacity necessary for large restoration projects. The LTEC is a 291-acre preserve located 4.5 miles east of the campus of the University of Southern Mississippi (USM). The preserve is owned by USM and is managed by the Department of Biological Sciences. One of the primary functions of this facility is to provide quality environmental education for citizens of south Mississippi. In March 2013, USM constructed a new building at LTEC to house the university's herbarium and fish museum as well as a new classroom to be used specifically for environmental education. The building's architects designed the building to be modular and they have already drafted preliminary plans for this greenhouse to be added to the facility. An additional benefit to locating this facility at LTEC is that it offers protection from coastal storms. Preliminary planning and site selection for this project has already been completed. Infrastructure for the project (water, power, and sewer) has already been installed. If selected as a Restoration Project, we would be able to have the facility completed within six months and would be able to have nursery st ock available for use within 6-8 months after completion of construction.	Forrest	Yes	No	No	No	No	Yes	No		No		$ 850,000.00	$ -	
	Research and Education	1659	1/17/2014	Greenways	A strong pedestrian and bicycle network of paths between parks, natural amenities and community services will enhance access to nature, meeting space, fitness opportunities, sports venues, and child-friendly playgrounds. The Greenways project will connect other major projects (Historic Pathways, Lighthouse Park, Riverfront Redevelopment, Beach Promenade, Point Park, Spinnaker Point) with a safe, inviting pathway. Major elements of the project include property acquisition, development of natural buffer zones near waterways, restoration of previously disturbed channels and bayous, wetland and marsh enhancement, boardwalk and pathway construction, lighting, and signage for information and educational purposes.	Jackson	Yes	No	No	Yes	No	Yes	Yes	55	Yes		$ 33,822,868.50	$ -	

	Research and Education	1679	1/21/2014	Hancock County Marsh Living Shoreline Project	We have designed and patented a system that will help control effects of sea rise. Our system will provide shoreline protection, will enhance building of habitat, and will assure land building. Designed to replace rock jetty, our new concept (Geo-TECH-Jetti) is installed above the water line, considering projected sea rise (as determined by official government determinations). Our Geo-TECH-Jetti units are filled with dredged material sourced from near the installation. Within a prepared area on top of the Geo-tech containers are RootZone Humus-filled, (RZHO), biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Our specialized method, proven in several previous deployments, ensures highly energetic and sustained plant growth, while providing shoreline force and sea-rise protection. Land building also results as these solutions continue to work efficiently, while cooperating with nature. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. The PVC stabilization devices are designed so that they can be retrieved at a future time, when it may be determined that plant rooting and accretion has been achieved and our â€œholdâ€ feature is no longer needed. Our proven methods allow for replacement of rock as stabilization means. Using our proven methods, we ensure rapid reestablishment of habitat. Shellfish, fin-fishes, invertebrates, and other vital coastal organisms are able to reestablish populations. Installing our Geo-TECH-Jetti units, we accomplish rapid rebuilding of the entire food-web, by providing the multiple benefits. (1) We provide protection from sea-rise. (2) We ensure rapid establishment of native plants along shorelines, making possible rapid habitat establishment. (3) Our methods assure accretion, as the long, well-set units of Geo-TECH-Jetti prevent erosion. (4) The Geo-TECH-Jetties also provide protection from surface and sub-surface oil encroachment on shorelines and into adjacent marshes. (5) Shoreline areas of land, (marshes or barrier island shores), behind the rows of Geo-TECH-Jetti units are filled with dredged material has our process continues, the filled RZH and RZHO are applied to ensure fertility. The Geo-TECH-Jetti is set in place, working from barges. Our Geo-TECH-Jetti Placement System makes it possible for us to position units efficiently, one in front of the other, and over lapping with space between them allowing existing habitat to continue functions as installation is accomplished. If it is decided that marsh or shoreline is not to be filled in some areas where Geo-TECH-Jetti are being installed, our units are set next to each other and can be used to serve as solid shoreline protection without back-filling.	Hancock	Yes	No	No	No	Yes	Yes	No		Yes		$ 6,248,000.00	$ -	
	Research and Education	1681	1/22/2014	Hancock County Marsh Living Shoreline	After 46 acres of dredge material is installed Trident is proposing to plant approx: 802,000 native coastal grasses and plants with RZHO (compost). Placed every 2.5 feet. Monitor growth for 1 year. Hire local labor and suppliers. Project coincides with installation of the Geo-TECH-Jetti Units . Project ID #1679 Planning on budgeting for the installation of dredge fill and 46 acres of subtidal oyster reef on another project sheets.	Plaquemines (I think he meant to put Hancock)	Yes	No	Yes	No	Yes	Yes	Yes		Yes		$ 2,110,000.00	$ -	
	Research and Education	1684	2/3/2014	Hancock County Living Marsh Shoreline Project	Mitchell Marine, Inc. will use a 12" hydraulic dredge to move material from a mining area 2000 feet off the shore to fill behind manmade berms. Approximately 130,000 yards of material will be moved over the planned berm area. Mitchell Marine is located in Biloxi MS. This coincide with Project # 1679 and 1681.	Hancock	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 5,923,200.00	$ -	
	Research and Education	1712	12/24/2015	BP for restoring the gulf fisheries	This program will address fishery management needs in the Gulf of Mexico for the commercial, CFH and the recreational anglers. This "BluePrint for Restoring The Gulf Fisheries will be lost if not funded . This program will provide help with discards of reef fish, provide Seafood for the Consumer and provide a pilot program To test a method that will allow anglers the opportunity to fish all year for red snapper and grouper. This program will also allow the opportunity to study behavioral science. This program will address accountability and sustainability of our coastal marine resource and those that rely upon the resource for food , jobs and pleasure. The programs infrastructure contain many components. This program will Include state agency's , commercial, CFH and private anglers. It will also have help from the Southeast science center with its design. A full proposal will be submitted if the council feels they are interested in a proposal that would test a license limitation for our recreational anglers. The fish would be leased from the present commercial quota so that it would not impact the regular open season. It would also collect data that is presently missing and needed inorder to have a sustainable fishery for years to come. It will cost 31/2 million to lease the fish for the pilot study. The remaining amount will be spent on outreach. Forms, Techs. Tags , PI, analysis etc.	Harrison, Hancock, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	15	Yes	Data need	$ 5,000,000.00	$ -	
	Research and Education	1716	2/6/2014	Proposed RESTORE Fund Land Acquisistions	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural or scenic significance in the counties of the Mississippi coastal Plain. This proposal is intended to provide a brief overview of several properties the Land Trust for the Mississippi Coastal Plain has determined to be in line with the goals set forth in the Gulf Coast Ecosystem Restoration Council's Proposed Comprehensive Plan entitled, The path Forward to Restoring the Gulf Coast: A Proposed comprehensive Plan: 1) Restore and Conserve Habitat 2) Restore Water Quality 3) Replenish and Protect Living Coastal and Marine Resources 4) Enhance Community Resilience 5) Restore and Revitalize the Gulf Economy. The proposed properties are dispersed throughout three of the six coastal counties in which the Land Trust for the Mississippi Coastal Plain Operates. Jackson County: Graveline Bayou-Cumbest 369 acres, Graveline Bayou-Whitehead 739.67 acres, Graveline Bayou-Mahoney 6.99 acres, Seapoint 16.64 acres, Bluff Creek 59.14 acres, Brickyard Bayou 138.82 acres; Harrison County: Turkey Creek 634.17 acres, Canal Land 218.50 acres; Hancock County: North Beach 41.169 acres, Ansley Area 331.57 acres, Magnolia Branch 19.89 acres, Cure Land Co. 132.85 acres. The attached document is designed to illustrate the value each of these properties holds. Acquisition of any one of these proposed sites and its subsequent conservation will increase property, economic, and aesthetic value of the area in which the site is located. The properties, if acquired by the Land Trust for the Mississippi Coastal Plain, all have the potential to restore and conserve habitats by providing havens for our unique coastal habitats and all species that reside within them. They can restore water quality by protecting our watersheds and, in turn, our water supply clean. They can enhance community resilience by offering educational opportunities and revitalize the Gulf economy by creating interesting new low-impact recreational spaces where adults, children, citizens, and visitors can fully immerse themselves in the beauty and intrigue of the Mississippi Gulf Coast in its restored natural state. Funding these acquisitions will ensure a legacy is left for our future, as RESTORE funds are meant to do.	Harrison, Hancock, Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	1719	2/6/2014	Harper-McCaughan Wetland Boardwalk/Nature Trail	An area of wetlands is bordered by Harper-McCaughan Elementary School to the east and a Power line corridor parallieling Canal Number 1. We would like a raised boardwalk/nature trail with education stations built. The area has a variety of trees and plants along with a multitude of Birds.	Harrison	Yes	No	No	Yes	No	No	Yes		No		$ -	$ -	
	Research and Education	1723	2/7/2014	Restore MS Endangered species	My proposal is to locate video camera on some of the piers/bridges in our coastal communities to help document the interactions of sea turtles with fishing gear. By doing so it will help to provide data for the science center to analysis to see what they can recommend to the anglers that are coming in contact with the turtle While fishing from these piers / bridges. I am aware of 11 or 12 piers where fishermen are coming in contact with two hundred or more Endangered species of turtles around these piers since the oil spill. This study will also help provide the effort data . The second part of the program is to provide some type of education about what the anglers can do to minimize contact and inter action with these turtles. There will be a outreach component of the study to interview those that do fish from the piers and document their interactions and their success of releasing the turtles unharmed. The cameras will also help ground truth what is taking place on these fishing piers as they relate to the interactions under the endangered species Act.	All MS Counties	Yes	No	No	Yes	No	Yes	Yes		No		$ 15,000,000.00	$ -	
	Research and Education	1733	2/10/2014	Gulfport Urban Estuaries Enhancement	Turkey Creek Watershed covers approximately 11,000 acres in Gulfport, Long Beach, and Harrison County. The watershedâ€™s two (2) main waterbodies are in need of significant restoration and enhancement. Turkey Creek and Brickyard Bayou are approximately 14 miles and 5 miles long, respectively. Both waterbodies are slow-moving coastal streams/tidal creeks that flow into ecologically important, sheltered estuarine ecosystems connected to the Back Bay of Biloxi and the Gulf of Mexico. This project will restore and enhance these individual estuarine streams to provide an aquatic corridor that serves as a sheltered nursery and as a rearing area for multiple saltwater fish species including those with recreational and commercial value. In addition, recovering the ecological health of these small estuaries would allow them to provide a sheltered refuge for larger and more mature fish during natural or anthropogenic events such as storms, droughts, or oil spills. Enhancements to Turkey Creek will further offer an opportunity to actively organize and empower a local minority committee in designing, permitting, constructing and maintaining a socially acceptable restoration effort. Leah Manhanâ€™s 2013 film, â€œCome Hell or High Water: the Battle for Turkey Creek,â€ describes the history of Turkey Creek, and the detrimental effects of human activity, land development, and natural occurrences. In 2006, a report was prepared by the â€œLand Trust for the Mississippi Coastal Plainâ€ entitled â€œWatershed Implementation Plan for the Turkey Creek Watershedâ€ (funding from the Environmental Protection Agency Region IV). This report, focusing on Turkey Creek, confirmed that Turkey Creek, like Brickyard Bayou and the entire Turkey Creek watershed, faces environmental degradation from: filing of wetlands, channelization, trash and debris, unregulated development and construction, uncontrolled stormwater increases, aquatic, terrestrial, and riparian habitat dilapidation, invasive species (particularly Chinese Tallow and cogongrass), and chemical contamination. Accordingly, Turkey Creek and Brickyard Bayou require similar restoration and enhancement efforts including, but not limited to: cleaning up debris and sediment, de-snagging and de-mucking, wetlands restoration, natural bank stabilization, and general enhancement. These activities would employ low-impact, EPA approved green infrastructure materials and techniques to the maximum extent possible supplemented by traditional best management engineering when necessary to maximize the Creeksâ€™ capacity to capture, temporarily store, and treat urban storm and flood waters. Emphasis will be placed on selective removal of invasive species and reestablishment of native vegetation, within the creek banks, thereby encouraging storm water filtration. Assessing, reengineering, and restoring the Forrest Heights Levee along Turkey Creek are also proposed as a component of this project to bolster local community resilience . Additionally, public access, public education, and public recreational activities would be developed with interconnected walking and bicycle trails and public greenways at each estuary in accordance with the Cityâ€™s Redevelopment Master Plan. Many of these greenways would be constructed on lands already acquired by the City of Gulfport that were known to have repetitive coastal flooding claims, with minimal land acquisition expected. Restrictive covenant/conservation easements would be placed on portions of the property to prevent future adverse impacts after restoration is complete. To assist with public education, interpretative signs and maps would be provided on these trails that also highlight the fishing, bird watching, kayaking, and other eco-tourism opportunities created by this project. Kayaking opportunities would be marketed and coordinated with the Heritage Trails Partnership of the Mississippi Gulf Coast's â€œbluewaysâ€ program; both Brickyard Bayou and Turkey Creek are already designated â€œbluewaysâ€	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 13,000,000.00	$ -	
	Research and Education	1740	2/17/2014	Camp Wilkes Environmental Enhancement	Camp Wilkes, Inc., a 501c non-profit, is seeking funding for restoration and enhancement of its 89 acre waterfront site on the Back Bay of Biloxi for the dual purpose of conserving its natural resources and expanding tourism attractions on the Gulf Coast. Development of project plans is underway.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	

	Research and Education	1741	6/1/2014	MS Gulf Coast Environmental Educational Collaborative	Coast Ecosystem Education and Training Collaborative (CEETC) The Oil Spill has further exacerbated the gap between disadvantaged minorities (African-Americans, Hispanic, Vietnamese and low income whites) and available education funding, job loss and access to marine vessels for education. The Mississippi Gulf Coast includes approximately 70 miles of coastline plus numerous bays, estuaries and navigable rivers. Not only does this ecosystem support a diversity of marine life and habitats, but our coastal waters support an economy that generates nearly $146 million each year. Unfortunately, although the Coastal Counties (Hancock, Harrison, and Jackson) have an abundance of diverse ecosystems, recreational opportunities, and marine life education minority children rarely get the chance to experience any of this richness. It is the goal of CEETC to connect under-served children from Hancock, Harrison, and Jackson counties (to include African Americans, Hispanics and Vietnamese but not limited to) with their habitat through our hands-on and feet-wet adventures. Connecting our youth to the outdoors will offer a learning experience that has been previously accessible only to the more affluent, as well as open doors to career opportunities in the fishing industry, marine biology, conservation, and eco-science in general. The CEETC project will be a multi-year (4 years) year-round and ongoing ecosystem,environmental, educational and recreational project designed to educate coastal youth in the area of marine life studies, in addition to the aforementioned. All of the environmental education programs will be in partnership with the eight (8) school districts in the three (3) county area along the Mississippi Gulf Coast and each school district's science/marine biology courses. All of the educational programs will also be in partnership with the Mississippi Gulf Coast Community College Marine Biology Dept. The marine life studies program will through some classroom, water safety classes (swimming and water survival), marine field trips, and practical experience provide instruction on the general ecology, habitats, vegetation types, wildlife and conservation issues of Coastal Mississippi. Other activities include, but are not limited to: the environmental and health hazards of marine debris, water and shore cleanups in conjunction with state environmental agencies to educate and certify young adults to work in environmental hazardous spills, study and observation of marine wildlife, laboratory investigations, marine arts and crafts, fishing, fish identifications, insects and vegetation in our ecosystem, and an introduction to the micro-organisms in our water. This education will include aquatic life, tributaries, and basins connected to the Gulf. "To protect and restore the Mississippi Gulf Coast Ecosystems through education, research and community stewardship." STRATEGY A: COLLABORATION Bring marine scientists, ecologists and organizations together to share resources and talents to effectively educate and mentor the under-served youth. STRATEGY B: EDUCATION	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes	No		Yes		$ 750,000.00	$ -	
	Research and Education	1749	2/18/2014	City of Waveland Sports Complex and Entertainment Venue	The scope of our project is to build a football complex and recreational venue that will support over 200 children on a weekly basis and to provide a safe and secure location for fun raising activities to support the up keep of the facilities. The proposal is to construct two lighted football fields for children from pee-wee to high school age, with concession area and open space where other events like soccer, Easter egg hunts, trick or treat events, open air concerts or movies could be seen, and other community outreach events could be held. The land is situated along one of the cityâ€™s major thorough-fares and is also located less than a mile from over 1100 Section 42 apartments. The proposed site, we believe will have far reaching effects on all of the children in our community as well as creating some long term economic benefits to our area. The fields could be used in cooperation with other recreational facilities in our area to support larger tournaments and providing a huge economic impact to the entire county. The Bay-Waveland football League has acquired a long-term lease of approximately 8 acres of cleared property at a rate of $1.00 per year from the Bay-Waveland Housing Authority. The property prior to August 2005 was a public housing site, the site was destroyed during Hurricane Katrina and the housing authority chose to rebuild the homes at a different location. The authority agreed at that time it was in the best interest of the community to use the land for recreational purposes and entered into a contract with the football league to support the development of the children in the area. The land was previously developed and is believed to have no environmental issues. All debris and rubble have been removed, and the land has been cut and some maintenance and repairs to the fence along Waveland Avenue have been completed.	Hancock	Yes	No	Yes	Yes	No	No	Yes		Yes		$ 2.80	$ -	
	Research and Education	1754	2/19/2014	College and High School Ecological Partnership	Develop a 250 yard stretch property that will facilitate botanical and zoological collaborative experiments. This will include developing access-ways to marsh and wetlands and equipment to conduct experiments.	Jackson	Yes	No	No	No	No	No	Yes		No		$ -	$ -	
	Research and Education	1759	6/1/2014	Waveland Recreational Light House and Water Front Development Project	The City of Waveland is a family-oriented community and is frequented by seasonal one-day visitors and weekenders that populate the area which make up the bulk of the summer tourist cache. The City of Waveland plans has designed, a two story, handicapped accessible open-air pavilion that would turn into a venue for special events such as weddings, concerts and reunions. This magnificent open air shelter will provide a picturesque setting for picnics, benefits, special events, outdoor classroom space, fishing rodeos weigh-ins, public concerts, parties and covered area for beach volleyball tournaments. The covered floor area of the open air pavilion will be approximately 2,940 square feet with a 2,940 square foot upper floor observation deck or viewing terrace using a lighthouse style elevator shaft. The upper deck will also include restroom facilities, benches, optical viewers and information boards designed to identify local wildlife and marine animals. Ample electrical outlets, for the lighting underneath the pavilion, will be added to provide the appropriate ambiance for any event. At the pavilion, families and friends of all ages can bring the magic of live entertainment and the performing arts to the City of Waveland in a whole new way â€" under the stars for everyone to enjoy! The Cityâ€™s vision is to have the pavilion available for community use that will allow everyone to share in the benefits of having a covered structure on the beach. With this in mind, it creates such place for our visitors a myriad of benefits and the enjoyment of the outdoor setting. The new open-air pavilion will make use of a solid structure nestled on the beach with a territorial view all opened to allow the soft, warm spring air breeze. This will create a hub for public town meeting, year round structured activity, associated festival, athletic events, health and exercise programs, youth education opportunities, and a centralized place to share community and public information while having a cornerstone that tourist and visitors can visit frequent. The City has made use of awarded tide-lands funds on adjacent areas of the beach that will be enhanced by the construction of the Lighthouse Pavilion Project. The city has constructed roughly two miles of concrete walking path to the south of the proposed site that now promotes pedestrian and bicycle travel from Washington St. in the neighboring City of Bat St. Louis to the end of the sand beach almost to Buccaneer State Park. The adjacent property also to the south is a Veterans War Memorial constructed originally by American Legion Post 77 and is in the process of being reconstructed and armored due to damage caused by Hurricane Isaac. The city took tidelands funds and assisted in the reconstruction to make the memorial more handicapped assessable and more user friendly. Benches as well as new concrete sidewalks to allow better access to the water will also been installed. The property directly to the north is the home of the Garfield-Ladner Memorial Pier, which is a lit fishing pier that is awaiting approval from FEMA to reconstruct after Hurricane Isaac that is utilized by thousands of visitors and local families every year for recreational and eco-tourism . The City has also recently constructed lit sand beach volley ball courts and is promoting outdoor family and tournament play and plans in the near future to place multiple pavilions along the beach to encourage more family oriented events such as swimming, bird watching picnics and surf fishing. The city is in desperate need of restroom facilities and we feel that the Lighthouse project will collect everything we are trying to do in one vital project and provide a huge economic development anchor for Coleman Ave. and our down town area. As we have shown it provides restroom facilities for both the handicapped and non-handicapped, a venue for education and conservation as well as education. The city is both proud and thankful for the awarding of tidelands in the past and feel that we have been good stewards of public dollars and if allowed we will continue to do so. The city is well prepared to do our part; the utilities are already in place for the most part with little of this money be needed for infrastructure and the parking lot is constructed and is able to be shared between all of the previously mentioned projects and at this point is used for beach front festivals as needed. The plans for the project are already completed and could be ready to bid in less than 30 days from award.	Hancock	Yes	Yes	Yes	Yes	No	No	Yes	10	Yes		$ 3,800,000.00	$ 250,000.00	
	Research and Education	1763	2/22/2014	Brick Bayou restoration project	Debris removal from the Brick Bayou streams which runs from the mouth of the escatawpa river into the Pascagoula river and run along side of the Hwy 613. The city would like to restore Brick Bayou because it runs through Saracenia Wetlands consisting of 35 acres of wetlands which runs from Hwy 613 to Hwy 63. The project would include a wetland delineation which would determine the amount of land that can be used for other purposes such as nature trails, sport complex, Police firing ranges and fire figthers training fields	Jackson	Yes	No	No	Yes	No	Yes	Yes	50	Yes		$ 300,000.00	$ -	
	Research and Education	1764	2/24/2014	Medical Monitoring Program of Coastal Mississippians	This Request for Funding should be granted because it is one of the few proposals submitted for consideration which seeks to achieve several of the specific goals and objectives originally sought to be addressed by the Trustees of the BP Restoration Fund. The Proposal that follows will sever to promote proactive environmental and cultural stewardship, education and outreach based on the gathering of real time data outlining how and to what extent, if at all, the substance released during the BO oil spill and the agents used to disperse the same has or will impact and/or affect the health of those persons living within the three-county, Mississippi Gulf Coast, area of South Mississippi who were directly or indirectly exposed to the released substance and/or the agents used to disperse the release substance. Form strictly an educational point of view, data will be gathered and disseminated to the MDEQ, EPA, DOI, CDC, Mississippi State Board of Public Health and any other regulatory bodies whose jurisdiction requires notification should there be evidence of any type of alarming trend related to a claimed exposure. Additionally, by capturing such data this will allow us to measure the human toll, if any, proximately related to the exposure to the substance and to identify the proper medical or treatment plans of care that produces the best and most expeditious outcomes. having such information at our disposal will better equip our nation and more specifically the State of Mississippi and the entire Gulf Coast Region with the knowledge to properly respond to similar spills and/or release in the future. Another anticipated byproduct of implementation herein of the proposed medical monitoring system will be a healthier South Mississippi. Through the use and implementation of preventive healthcare techniques, physician led and sponsored encouragement, proactive and preventative healthcare maintenance, it is believed that recreational prowessness among many who live within the three-county Mississippi Gulf Coast area will become the watch-word of the day and we will see individuals who will begin to strive to attain and live a more healthy lifestyle. Finally, funding of this request will have a specific intangible benefit of increasing the public's confidence that an independent group of healthcare professionals are monitoring the potential health effects of the oil spill as it relates to South Mississippians who may have been exposed to the same, either directly or indirectly, and that such group of diverse professionals are positioned to disseminate accurate and unbiased information. This will help to dispel much of the misinformation that has been disseminated by parties on every side of this controversy.	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	Yes	27.6	Yes		$ 14,121,000.00	$ -	
	Research and Education	1766	8/25/2014	Deepwater Horizon Oil Spill Impacts: A Pilot Educational Program	The Marine Education Center (MEC) proposes to implement a pilot education program to inform local students about the effects of the 2010 Deepwater Horizon oil spill event. This program would take place during the academic year, and provide field trips for every 5th grade student in Jackson County (â‰ˆ 1,500) to the Gulf Coast Research Lab. Activities will include a 90-minute boat tour of the Davis Bayou area aboard the Miss Peetsy B, which was donated to the MEC by Jimmy Buffet and his sisters, Lucy Buffett and Laurie Buffett-McGuane, in honor of their mother who was passionate about education. The vessel's name comes from Mrs. Buffet's nickname - Peetsy B. The Buffet family, originally from Pascagoula, donated the vessel to help educate students about their coastal environment, and ultimately create a more informed citizenry to protect and maintain our local marine habitats. During the Davis Bayou tour, students will learn basic salt marsh and estuarine ecology, and the connection of salt marshes and estuaries to other ocean habitats, the importance of the marsh ecosystem, and the potential impacts to the area from oil exposure. After the tour, students will engage in a series of classroom activities and demonstrations regarding oil spill impacts and how these might differ in shallow and deep water habitats. Participating teachers will be provided with lesson plans to implement in their classrooms in support of this program, and all activities and curriculum will be tied to the Mississippi Science Framework, National Next Generation Science Standards, and the Common Core Curriculum.	Jackson	Yes	No	No	No	No	No	No		No		$ 102,800.00	$ -	Curriculum development

	Research and Education	1767	3/18/2014	Grand Bayou Ecological Restoration	The Grand Bayou Ecological Restoration project is in Campbell Bayou-Bayou Caddy watershed (HUC 031700091401) west of the City of Waveland in Hancock County, MS surrounding Buccaneer State Park. The project includes three interdependent estuarine ecosystems; 1) Grand Bayou, 2) Mud Bayou and 3) Jackson Marsh. Grand and Mud Bayous are open estuarine marshes supporting sub-tidal and inter-tidal communities. The Mississippi Department of Marine Resources manages the 565 acre Grand Bayou as a Gulf Ecological Management Site for its special ecological significance and unique habitats for producing fish, wildlife and other natural resources. Jackson Marsh is abuts Grand Bayou upstream. A low-head dam built in the 1960s severely disrupted tidal influence in the marsh and freshwater flows into the Bayou. The altered hydrology and salinity allowed the bayou and marsh to become infested with invasive aquatic species, e.g. water hyacinth, cattail and Chinese tallow in riparian areas. Trash and debris further reduced flows and trapped sediment. The project will reestablish linkages between these ecosystems by restoring, 1) the natural hydrology of 20,518 linear feet of streams and bayous and 2) 662 acres of adjacent wetlands and coastal marsh habitats. This will have significant and measurable benefits to highly altered coastal streams and habitats by providing integrated, aquatic green corridors in urban/suburban landscapes. Further, the project addresses stormwater management and will be designed and constructed to use natural hydrology to minimize erosion and sedimentation throughout the ecosystems. The hydrology will be restored by removing trash and debris from the waterways and demucking accumulated sediment from primary channels. To the maximum extent practicable, Green Infrastructure techniques and materials will be used to integrate the roughly 25% of the City of Wavelands stormwater run-off that enters Jackson Marsh and Grand Bayou into the natural hydrology. Modification or alternatives to the low-head dam will be evaluated and a solution negotiated with the property owner. For wetlands, invasive vegetation will be physically removed and native marsh plants with high phytoremediation potential planted. This will effectively and inexpensively treat residual and periodic continuing oil-contamination once established. The restored hydrology will help return historic tidal flows and salinity levels to enhance delivery of estuarine natural resource services and hinder the return of invasive aquatic and riparian species. Finally, the project will add 2.2 miles of nature/education trails and up to four interpretive pavilions to Buccaneer State Parks trail system to enhance public access, recreation, and tourism to the restored coastal ecosystems. This project complements and supplements three (3) other proposed restoration projects: 1) the Mississippi Department of Environmental Qualityís (MDEQ) Restoration of Buccaneer State Park Natural Resources Damage Assessment (NRDA) proposal, 2) Buccaneer Park Two-Tiered Restoration (Project-1813) and 3) Jackson Marsh, Grand Bayou and the Adjacent Gulf: Headwater Hydrologic Restoration (Project 1872).	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ 9,600,000.00	$ -	
	Research and Education	1768	3/19/2014	Weeks Bayou Restoration/Education Project	The MEC is requesting support for a coastal habitat restoration project at the mouth of Weeks Bayou in the City of Ocean Springs, MS. The disturbed property was the site of a private residential home constructed on filled coastal wetlands habitat. The wetlands were filled in 2003, with the home completed in early 2005. The home was lost in Hurricane Katrina in 2005 and has remained undeveloped for the past eight years. The City of Ocean Springs acquired title to the property with FEMA funds and has conveyed the property to the Land Trust for the Mississippi Coastal Plain to restore the property to itsâ€™ natural state. The MEC is proposing the restoration work will be planned and implemented through a cooperative partnership between the MEC, the City of Ocean Springs, Land Trust for the Mississippi Coastal Plain, Ocean Springs School District (OSSD), and Mississippi State Universityâ€™s Gulf Coast Community Design Studio (GCCDS). The MEC, working with the GCCDS, will plan a way to restore the site that is likely to include removal of part of the retaining wall, re-grading the land to include some high land near road with natural slope and access to water for sampling. The site will be replanted with appropriate native wetland plants under the direction of GCRLâ€™s Coastal Ecology Group. A small observation deck and access to Weeks Bayou for water quality, fauna and flora sampling and monitoring will provide opportunities for MEC based educational and community outreach programs after completion. MEC educators will work with Ocean Springs Schools to coordinate a student based monitoring program for ~100 selected OSSD middle school students and 5 advising teachers. The monitoring may include data collection, water quality, elevation surveys on adjacent beach, sampling and analysis to assess restored slope function using benthic invertebrates or plant recolonization. All sampling activities are covered under the Saltwater Scientific Collection Permit that is issued to GCRL through the Mississippi Department of Marine Resources. The successful implementation of this restoration/education project will have short-term and long-term benefits.	Jackson	Yes	No	No	No	No	Yes	Yes	10	No		$ 158,855.00	$ -	
	Research and Education	1771	3/20/2014	Bangs Lake Viewing Pier and Park	In an effort to provide increased access to natural resources, the bangs Lake Viewing Pier and Park will increase the ecological value of the area by providing a viewing center pavilion, fishing pier, and boardwalk park highlighting the natural beauty of marsh land. Not only will visitors come to walk along the marshes but a boat ramp will provide access to the lake and the Gulf. Along the boardwalk, interpretive stations will display information highlighting the history and legacy of Bangs lake and the surrounding marshes. The area will also feature a watercraft outpost to rent kayaks, canoes, and paddle boards. Visitors are just a short ride to the Gulf and can explore the surrounding lake. By placing a park along Bangs lake in a highly industrialized area, the marsh land within the park can be preserved and serve to further the beautification of the surrounding community.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1772	3/20/2014	Marsh Restoration	This project will use the sediment removed from the bayous within the Bayou Cassotte-Pt Aux Chenes Watershed for marsh creation pump it via sediment pipelines into an area of open water near the Pt Aux Chenes Bay. Marshes within the watershed have degraded to open water from a combination of factors, including lack of natural fresh water and sediment input. The sediment removed from the first project will be transported via sediment pipelines into an area near Bangs Lake. the material will spread over the project area and become primarily contained with existing land features. The pipeline will be camouflaged under the boardwalk in the area adjacent to the Bangs Lake Viewing Pier and Park. Unlike most marsh restoration projects that involve borrowing fill material from adjacent shallow water areas within the landscape, this project will utilize renewable bayou sediment minimizing disruption of the adjacent water and marsh platform.	Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	
	Research and Education	1777	3/20/2014	Gulf Park Estates Fishing Pier Expansion	This project will renovate the existing fishing pier, while expanding the boat launches to accommodate a wider range of vessels. A park area will house organized parking, boardwalks, lighting improvements, landscaping, and amenities such as restrooms and fish cleaning station. The current pier is located along the Gulf outside of Biloxi Bay. This area is optimal for fishing and recreation activities. the expansion of the current fishing pier along with the creation of additional amenities will increase and enhance the Gulf Park estates community quality of life, provide additional access to the natural resources along the Gulf, and enhance overall recreational experiences. Within the area surrounding the fishing pier, additional shoreline stabilization and riprap, will replace existing water edge treatments. The goal of this project is to increase recreational opportunities available to the adjacent communities and allow improved access to natural resources.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1783	3/21/2014	Riverwalk Park and Educational Boardwalk Trail	This project will construct a Riverwalk Park and Educational Boardwalk Trail. The park will be located across the street from the Jackson County Ski area. It will consist of a park with pavilion and restrooms, and a boardwalk pier parallel to MS 613 that will allow for fish feeding and highlight native species and cultural history of Beardslee Lake. This project will promote tourism to Moss Point and the County, generate local ecosystem education outreach, provide additional recreation opportunities along the greenway, and stimulate environmental cultural stewardship, tying the unique cultural aspect of the community with the ecosystem along Beardslee Lake. The goal of the park will be to create an inviting and functional waterfront environment in Moss Point that restores the quality of life for residents and continues improving public access to natural resources.	Jackson	Yes	No	No	Yes	No	No	Yes		Yes		$ -	$ -	
	Research and Education	1787	3/21/2014	Jackson County Scenic Water Trail, North Trailhead	This trailhead project will consist of a trail head with public boating access, walking trail, heritage museum and outpost. The Carter Lake Fishing Outpost will restore Carter Lake and provide recreational fishing near the Northern Trailhead. The Pascagoula Water Trail Cultural and Research Center will create an interactive culture and science center. The cultural center will focus on the native American culture for which the region derives its name and the science center will highlight conservation effects of natural wildlife mainly the efforts of the Pascagoula Wildlife Management Area. This center will serve as the primary information center for the entire trail. The North Trailhead Walking Trails will consist of walking trails adjacent to the river trail and Research center. This provides visitors not going on the water trail a small glimpse into the natural beauty of the Pascagoula River. North Trailhead Water Craft Outfit will develop an extension service that provides kayak, canoe, and other watercraft rentals to visitors. North Trailhead Boat Launch will create a boat ramp from which visitors to the Northern Trailhead can start down the Water Trail. Pascagoula River Scenic Water Trail Campground will create a campground along the water trail open to both tents and RVs, extending the stay of visitors to the area. Old Americas Road and Cedar Creek will be improved from the existing 2-lane road to a 3-lane to handle increased traffic volume to the North Trailhead. Pascagoula River Trail Road will be constructed as a new road tying Cedar Creek to the North Trailhead.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ -	$ -	
	Research and Education	1789	3/21/2014	Marine Education Center Outdoor Learning Area	Plans are in place to construct a new 28,000 sq. ft. Marine Education Center at the Gulf Coast Research Lab's Cedar Point Teaching Site. The new MEC facility is an $11.5 million dollar FEMA funded project with anticipated construction beginning in 2014. The new facility will be a center for public education and outreach in the coastal sciences and will be comprised of classrooms, laboratories, and educational exhibits. The MEC proposes to build two outdoor classrooms, an observation tower, marsh walk-out sampling stations, and ADA accessible trails as part of this project. The MEC specializes in field-based learning experiences that support science curricula and the Cedar Point Teaching Site provides extensive opportunities for outdoor environmental education and recreation. With the development of this outdoor learning infrastructure, visitors and students will be able to explore a range of coastal environments and engage in hands-on, feet-wet field based learning experiences. These open-air facilities will allow students to study coastal environments such as the bayou, the marsh, the Mississippi Sound, bay-heads and magnolia-live oak forests while protecting the resources from overuse. The low profile marsh walk-out sampling stations will be constructed over the marsh with open mesh frames and close to the Mean High Tide level which will reduce impacts to the tidal flow and minimize impacts to vegetation. The marsh walk-out sampling stations will allow students to monitor flora and fauna in the fringing marsh areas of the MEC site. These sampling activities are covered under the Saltwater Scientific Collection Permit that is issued to GCRL through the Mississippi Department of Marine Resources. The trails that connect these structures will make them accessible to students and visitors of most abilities. All trails, outdoor classrooms, and the proposed observation tower will be built to ADA standards and will be accessible to most students and visitors. These structures will be used by up to 10,000 students and visitors each year.	Jackson	Yes	No	No	Yes	No	No	Yes	80	No		$ 1,033,850.00	$ -	
	Research and Education	1793	3/25/2014	Educational Exhibits at the Proposed Marine Education Center	Plans are in place to construct a new 28,000 sq. ft. MEC facility at GCRL"s Cedar Point Teaching Site. The new MEC facility is an $11.5 million dollar FEMA funded project with anticipated construction beginning in 2015. In this new facility is designated exhibit space that will be open to the public at no cost and will include a series of high quality, interactive educational exhibits. The three exhibits will focus on The Science of the Spill, Coastal Hazards/Community Resilience and Blue Water Science. The Science of the Spill exhibit will be an extension of the work that GCRL did as part of a Rapid Response Grant through the National Science Foundation in 2010 â€" 2011 and continued through an EPA grant in 2013. The exhibit will address the role of science during an emergency. It will use published research conducted by GCRL scientists and others to answer the questions set out by the Gulf of Mexico Research Initiative: 1.) What happened to the oil and the dispersants? 2.) What were the effects on the environment? 3.) What methods are being used for recovery and how are they working? 4.) What are the impacts on human health? The Coastal Hazards/Community Resilience exhibit will describe the natural disasters (e.g., hurricanes) and ecosystem processes (e.g., sea level rise) that can affect communities in the coastal region and highlight strategies that communities and individuals can adopt to be more resilient. The Blue Water Science exhibit will highlight the research of GCRL researchers in offshore environments that most people never experience. Ecosystem processes and species that may be highlighted include the loop current, sargassum, and large pelagic species such as whale sharks. Visitors to the MEC, which include students and citizens from the region, will gain a better understanding of the impacts on the Gulf of Mexico from the Deepwater Horizon oil spill and the importance of long term monitoring and research to help ensure a healthy Gulf.	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 2,782,000.00	$ -	

	Research and Education	1796	6/1/2014	The Crawfish Restoration Trail	Crawfish help to maintain the eco system by scavenging and eating algae that rob fish and plants of sunlight and oxygen. Crawfish also act as a source of food for other animals. Because crawfish are sensitive to any form of pollution, they are good indicators of water quality. There are over 400 species of crawfish in North America and the most common, the red swamp crawfish, can be found in abundance in the Mississippi River Basin. However, there are two species of crawfish which can only be found in George, Green and Jackson Counties in Mississippi and Mobile County in Alabama, the dwarf crawfish and the least crawfish. Globally, NatureServe lists their status as vulnerable while on the State/Province Conservation list they are considered imperilled. Hope CDA request funds for the implementation of an environmental cultural stewardship program which would educate students and spur ecotourism using the crawfish as motivational symbol. OBJECTIVE: 1.Student Education a. Educate summer and afterschool program students on environmental stewardship and the importance of crawfish and other animals in maintaining the ecological balance of this river system. b. Provide education on the restoration site though maps and best management practices designed specifically for the project activity. c. Study the impact of growth and spawning by increasing water temperature using solar technology at an artificial marshland system erected at Hope CDA. Information will be shared with scientist through the NatureServe, Citizen Science Program. 2. Student Restoration and Research Project a. Students will clean site and implement best management practices for the critical habitat of the crawfish and other animals and plants including but not limited to planting shade trees. b. Take eco tours along the Pascagoula River. 3. Educate Public and Spur Tourism a. Sponsor an art contest to design/sculpt a crawfish which could be used as a conservation symbol and site marker along the river. b. Strategically place markers at river sites in three counties. c. Students will develop a virtual eco tour on the Hope CDA website describing actual sites marked by numbers 1-10 on the "Crawfish Restoration Trail (Tour)." A phone application or link to the Hope CDA website will be developed so that tourist can take the actual tour from markers 1-10 while being virtually guided by students through recorded video presentations about each site. Brochures will be provided to the Convention and Regional Visitors Bureau. promote Trail during the Pascagoula River Nature Festival OUTCOMES 1. Students will learn that biodiversity is a natural heritage and take responsibility for stewardship of vital natural resources. 2. Crawfish species (least and dwarf) listed as imperiled will be elevated to secure in their conservation ranking. 3. Tourism will be increased through the institution of the Crawfish Restoration Trail.	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 300,000.00	$ -	
	Research and Education	1797	4/1/2014	Mississippi Dusky Gopher Frog Preservation Parcel at Tradition	Acquisition of 270-acre, currently owned by Columbus Communities, LLC, contiguous with the Desoto National Forest in central Harrison County, Gopher Frog Preservation Parcel at Tradition would serve multiple environmental purposes: a. enhance future water quality and habitat of the estuarine ecosystem comprised of the Biloxi River watershed flowing into the Biloxi Bay-Mississippi Sound, thereby aiding in the restoration of these natural resources harmed by the BP oil spill, and b. increase permanent habitat around Glen"s Pond, the primary breeding site of the Mississippi Dusky Gopher Frog (endangered species), the Red Cockaded Woodpecker (endangered species), and the Gopher Tortoise (threatened species), which, with Longleaf Pine, are important to the restoration of natural resources in the Coastal Plain. This additional habitat would likely increase the population and survivability of the MS Dusky Gopher Frog. This 270-acre parcel borders critical habitat recently designated by USFWS for the MS Dusky Gopher Frog. Approximately 100 MS Dusky Gopher Frogs breed in Glen"s Pond, in the National Forest adjacent to the parcel proposed for acquisition, making this parcel and the Desoto National Forest contiguous for ease of controlled burns and other ecosystem management techniques. Recently, USFWS has successfully hatched Dusky Gopher Fog eggs from Glen"s Pond in another pond nearby. If acquired by a state or federal agency or a land trust, the Tradition parcel could be dedicated as a perpetual preserve for a)enhancing the survivability of the MS Dusky Gopher Frog and the Gopher Tortoise, b) restoration of longleaf pine on the parcel, and c) enhancement of water quality in the estuary formed by Biloxi River, Bay of Biloxi, and Mississippi Sound. Restoring the longleaf pine ecosystem on this parcel would also create habitat for another endangered species, the Red-cockaded Woodpecker. It is our understanding that biologist from the USFWS and the Center for Biological Diversity, who have studied the MS Dusky Gopher Frog, support the acquisition of this parcel by an appropriate governmental agency or land trust to enhance the habitat, range and survivability of the MS Dusky Gopher Frog and its partner, the Gopher Tortoise, a threatened species. The Dusky Gopher Frog spends part of its life cycle in Gopher Tortoise burrows along with approximately 300 other species of animals, plants and fungi. In order to increase the chance of survivability of the MS Dusky Gopher Frog, biologists predict that improving the quality of the additional habitat through controlled burns, relocation of Gopher Tortoises, and planting of longleaf pine, the MS Dusky Gopher Frog population from Glen"s Pond would likely increase, allowing government biologist to transfer more of the eggs or frogs that hatch in Glen"s Pond to other historically suitable habitats in the Southeastern United States, further increasing the range and survivability of this endangered species.		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1798	4/3/2014	Mississippi Native American Heritage Program	The Ohr-O'Keefe Museum of Art sits on a four-acre stretch of the Mississippi Gulf Coast contiguous to the Mississippi Sound that archeological studies show once was inhabited by American Indian tribes. A central focus of the Ohr-Oâ€™Keefe Museum and an important part of the American Indian culture, dating from pre-historic times to the contemporary tribes of Mississippi, is pottery. The Museum proposes annual summer programming, to present cultural, educational and arts programming about not only the art and pottery of the Mississippi tribes, but also their customs and traditions, thereby enabling local and out-of-town Museum visitors of all ages to discover and explore the practices and contributions of past and present Mississippi Native Americans. Development of these programs will involve consultation with Mississippi tribal representatives, the Mississippi Department of Archives and History, the Mississippi Department of Marine Resources, and the National Museum of the American Indian in Washington D.C. The program, which will show a continuous flow of pottery tradition and culture on the Gulf Coast linking the Museum with Mississippi Native American Heritage, will include: -Seminars for the investigation, discussion and understanding of issues facing native communities in Mississippi that will provide a statewide forum for discussion, study and civic engagement of historical and contemporary topics of concern and interest to Native peoples and the general public -Demonstrations, lectures, workshops, and films that will highlight both traditional and contemporary Native American arts and artisans -After school and summer youth programs teaching Mississippi American Indian crafts and lore to children in a local venue -Nature tourism relating to nearby Deer Island sites to tell the story of Mississippi American Indiansâ€™ tribal art and way of life. Not only is Deer Island home to various eco-systems, but also it is home to Native American shell-middens, pottery shards and firing pits. -Traditional and contemporary art objects from Mississippi tribes will be professionally exhibited and interpreted in a Museum gallery -Professional development opportunities for teachers through workshops that span a range of topics and enable teachers to discover analytical approaches to connect the museum's collections and content with classroom teaching strategies will be held at the museum for educators in all subject areas The Mississippi Native American Heritage Program will benefit the community in numerous ways, including the promotion of partnerships with state and local entities, creation of jobs for artists, teachers and others connected to the programming aspects of the project, extended stays for visitors to the Gulf Coast, professional development opportunities for area educators, and expansion of nature tourism through a link with the Native American history on neighboring Deer Island. To enable the exhibition and program space that is required for the Mississippi Native American Heritage Program, the museum requests funding to complete construction of its final gallery space. With completion of this space there will be dedicated gallery space to devote to the Mississippi Native American Heritage Program in the galleries on the Museum campus.	Harrison,Hancock	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	1799	4/4/2014	Multifaceted evaluation of living shorelines in the Mississippi Sound	Living Shorelines (LS) are primarily designed to control erosion using non-traditional materials that enhance shoreline stability while preserving natural coastal processes. Although these approaches for shoreline protection have been successful for increasing shoreline stability and improving localized biotic integrity in some areas, very few projects are monitored to evaluate long-term success. Given the novelty of LS, each project represents a unique opportunity to gain valuable information that can be used to inform future project design within an adaptive management framework. We propose a long-term, multifaceted monitoring approach for several proposed and newly constructed LS along the Mississippi coast that includes measuring physical and biological variables to determine if LS are improving shoreline stability and increasing biotic integrity compared to unaltered control sites. The first objective is to quantify the effects of LS on shoreline stability, soil properties, water quality, and biotic communities compared to unaltered control sites that are likely candidates for shoreline protection, but are not receiving a treatment. Physical parameters include shoreline erosion, sediment quality, and water quality. Biological parameters include infaunal, demersal, and nektonic communities, and diamondback terrapin nesting and movement. The second objective in this study is to develop cost-benefit analyses for each monitored living shoreline by valuing project costs and net benefits for each site using functional values of sediment storage, nutrient retention, shoreline habitat, land values, and project costs. Comparing physical, biological, and economic benefits of LS with control sites will help to determine which LS options are cost-effective. A more complete understanding of the functions provided by alternative shoreline protection measures is sorely needed in Mississippi and in the larger southeastern U.S. where very little research has been done. By gauging responses of a large suite of variables, we believe that the proposed research will illuminate the strengths and weaknesses of several different approaches for shoreline protection, which will ultimately improve future decision making in this region. The LS approach will continue to be a viable option to control erosion by natural resource managers; therefore, this research will help decision makers fund or permit appropriate cost-effective LS projects in the Gulf of Mexico.	Hancock	Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -	
	Research and Education	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kempâ€™s Ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kempâ€™s ridley sea turtles are a Critically Endangered species that relies heavily on the north-central Gulf of Mexico for developmental habitat for foraging juveniles and sub-adults. Since 2010, more than 800 sea turtles, mostly immature Kempâ€™s ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kempâ€™s ridleys have been incidentally hooked at local fishing piers in Mississippi. A variety of factors are likely responsible for increased strandings including degradation of natural oyster reefs and subsequent declines in abundance of essential prey items of the species that rely on these habitats. Declared failures of both oyster and blue crab fisheries in recent years support this hypothesis and illuminate the importance of a healthy ecosystem for recovering populations of Kempâ€™s ridleys. The purpose of this project is to facilitate the recovery of Kempâ€™s ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kempâ€™s ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kempâ€™s ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kempâ€™s ridleys and their prey, will promote the restoration and recovery of Kempâ€™s ridley prey species, and could potentially promote development of new economic opportunities associated with stock enhancement. Recent research led by IMMS has revealed that the Mississippi Sound is a vital developmental habitat for Kempâ€™s ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kempâ€™s ridleys has indicated the importance of these areas for developing sea turtles. To promote the restoration and recovery of this endangered species, continued monitoring of its important habitats and prey and enhancement of local stocks of prey items is essential. Ultimately, this work is will play an important role in both ecosystem and economic restoration of the north-central Gulf of Mexico.	Hancock, Jackson, Harrison	Yes	Yes	No	No	Yes	Yes	Yes	60	No		$ 18,000,000.00	$ -	

	Research and Education	1810	4/14/2014	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the north central Gulf of Mexico	In the aftermath of BP Deepwater Horizon Oil Spill, larger numbers of bottlenose dolphins and sea turtles have stranded in the northern Gulf of Mexico, and many of these strandings have occurred along the coast of Mississippi. The Institute for Marine Mammal Studies (IMMS) has played a central role in the stranding response and rehabilitation efforts during this time. The proposed project will promote the restoration and recovery of dolphin and sea turtle populations in Mississippi waters through a systematic approach of 1) responding to dolphin and sea turtle strandings; 2) rehabilitating sick and injured dolphins and sea turtles; and 3) monitoring the recovery of wild dolphin and sea turtle populations. Representing apex predators, dolphins and sea turtles are ideal bioindicators of ecosystem health. This project, led by Mississippi State University (MSU), will facilitate understanding of how these species have endured numerous environmental stressors and foster their future survival, which is imperative for the restoration and recovery of the northern Gulf of Mexico. This project adheres to the selection criteria set forth by the National Fish and Wildlife Foundation (NFWF), to remedy harm and eliminate or reduce the risk of future harm to Gulf Coast natural resources that were impacted by the Deepwater Horizon oil spill. This project conforms to NFWF criteria as follows: -The Mississippi Sound and adjacent waters were directly impacted by the oil spill and response activities -Marine mammals and sea turtles experienced direct and indirect injury resulting from the oil spill and response activities in the north-central Gulf of Mexico -Project includes science-based methodologies that produce measurable and meaningful conservation outcomes to marine mammals, sea turtles, and their habitats -This project will help mitigate damages from the oil spill, aid in the restoration and recovery of these species, and enhance management of marine resources by state and federal agencies The Mississippi Sound and adjacent waters of the north central Gulf of Mexico (nGOM) provides essential habitat for several endangered and threatened species including Kemp's ridley	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 16,520,879.00	$ -	
	Research and Education	1812	4/25/2014	Economics and The Gulf Coastal States	The Objective is to collect economical data for the Gulf Coast fishermen, Anglers, processors, charter for hire and businesses that rely on our Nations marine resource to provide food and jobs for our Nation. This project will attempt to capture the true value of our Gulf of Mexico States marine resources and seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the products harvested throughout the entire seafood supply chain. We have never collect the true value to regional businesses benefitting from Gulf seafood. In most surveys they only show the x-vessel price. We will do a literature review to make sure we have included all value from the fish to the plate and all the jobs that depend on our Marine resource and all revenue that our nation receives. One example is Menhaden is used for making oil, fertilizer, dog and cat food. The oil is used as the primary ingredient in WD forty. This example is to show how the value chain comes into play and the many jobs that are created through the value chain. The outcome is to have a social and economical survey that will help capture the true value of the commercial seafood industry to the Nation as a whole. We will also provide the other businesses that depend on the seafood from the Gulf of Mexico to make their living. This data has never been collected before. If a Disaster should strike again we will have the true value and as an extra bonus of this proposal. Our science center will have the information and so will our fishery management councils that use this type of information in their management plans.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	No	Yes		Yes		$ 5,000,000.00	$ -	
	Research and Education	1814	5/6/2014	Gulf Coast Reef Fish reproduction with Fish Management	This project will help reproduce the fish that were killed by the oil spill. The Gulf of Mexico has a management tool called ITQ. The commercial Industry holds quota shares of Reef fish that can be leased, fished or sold. I have contacted some of the shareholders that are willing to lease some of their quota shares so that the fish can remain in the water to reproduce for the future. This will benefit the resource by allowing the fish to stay in the water and reproduce for the future. This reproduction will help restore the resource that was made sick by the oil spill and died. This project will not only help restore but will help give back to both the recreational fishers and commercial fishers as well as the consumers of this resource by allowing the fish to remain in the water and reproduce. This is a project that will do exactly what BP said they would do and that is to restore the living marine resource to it condition before the oil spill. This project will hep keep our coastal communities that depend on our living marine resource as a source of income for their business 's strong.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ 8,000,000.00	$ -	
	Research and Education	1815	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase I - Roadscape Assessments	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560-square-mile (11,238,400-acres) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Program Work Area Map). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase I assessments identify and characterize the location, features, conditions, maintenance regimes, previous projects, natural resources, and ecosystem impacts data for the work area unpaved road crossings, borrow pits, and crossing zone invasive species. The intensive data collection, analysis, and prioritization conducted in this phase establish the technical baseline for site treatment decision making, implementing sustainable projects, measuring improvements, and facilitating future requirements. The assessment process conducts a NEPA programmatic environmental assessment; integrates previous projects' lessons learned; builds baseline resource datasets; inventories county roadscape maintenance processes and resources; collects and analyzes site-specific field data; and scores, ranks, and prioritizes sites for treatment. It is assumed that during Program Years 1 and 2 field surveys would be conducted at an estimated 2,500 unpaved road crossings and 200 borrow pits. A discussion of Phase I is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 2,343,000.00	$ -	
	Research and Education	1816	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase II - Roadscape Prescriptions	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase II employs the findings from Phase I to develop prescriptions for selected high-priority unpaved road crossing and borrow pit sites, and an overarching treatment plan for crossing zone invasive species. A high-priority site is one identified as having a high potential for environmental impact and a high comparative ranking among the sites assessed for treatment. This phase determines the types of changes that could take place at high-priority roadscape sites. The prescriptions phase is a pivotal interim step between site assessment and project treatment that provides planners, engineers, and practitioners with information critical to minimizing project failures, maximizing the effectiveness and treatment extent of available funds, and facilitating the implementation of sustainable, long-term solutions. Phase II can only be conducted after completion of Phase I components. For Program Years 2 through 5, approximately 80 crossing and 40 borrow pit site prescriptions would be developed. A discussion of Phase II is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 995,000.00	$ -	
	Research and Education	1817	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase III - Roadscape Treatments	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase III implements on-the-ground roadscape treatment projects that produce the desired measurable improvements identified in Phase I and conceptualized in Phase II. Projects are designed and implemented applying prescription alternatives to high-priority unpaved road crossings, borrow pits, and crossing zone invasive species. Crossing and borrow pit projects would include contracted project designs, engineering, and construction and support of county administered projects through technical consultation and site inspection services. Local construction companies would be used to support project design and implementation. As applicable, project activity permitting would be conducted with state and federal regulatory agencies during project design phases. For Program Years 3 through 5 there would be construction projects for an estimated 15 crossings and 10 borrow pits and invasive species treatments at an estimated 750 crossing zones. A discussion of Phase III is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes	80	No		$ 7,913,000.00	$ -	
	Research and Education	1818	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase IV - Roadscape Monitoring	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase IV provides comprehensive monitoring of crossings, borrow pits, and affected waterway pre- and post-treatment to document conditions and identify changes. Collection methodologies and protocols for each monitoring activity have been developed to provide standards, procedures, criteria, and indicators for collecting information. For Program Years 3 through 5, crossing baseline monitoring would be conducted biannually at 200 selected high-priority sites, while pre- and post-project construction monitoring would be conducted at 15 sites, sediment delivery monitoring at 10 sites, and aquatic ecosystem monitoring at 15 project sites. Borrow pits monitoring would include biannual baseline monitoring at 40 high-priority pits and annual project and aquatic ecosystem monitoring at 10 project sites. An estimated 75 crossing zone invasive species sites would be inspected annually. A discussion of Phase IV is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 346,000.00	$ -	

	Research and Education	1819	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase V - Information Dissemination	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase V provides the means to make the extensive amount of information developed by the program available to the public and to resource stewards responsible for implementing and/or maintaining roadscape treatment projects. The purpose is to: 1) increase citizen awareness of water resource benefits, impacts, and restoration activities and promote their active participation in watershed stewardship; 2) educate practitioners in roadscape asset maintenance and reclamation; and 3) promote partnerships among agencies, resource managers, and other organizations to address watershed-based restoration and conservation needs. The South Mississippi Watershed Recovery Initiative program website would be deployed in Program Year 1, the roadscape manual would be developed in Program Year 4, and two webinars per year would be conducted during Program Years 4 and 5 for the proposed five-year funding period. Phase V is not constrained to the completion of any previous phase and can operate as needed in concurrence with the other phases. A discussion of Phase V is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 235,000.00	$ -	
	Research and Education	1823	5/13/2014	Center for Marine Ecosystem Health	The Center for Marine Ecosystem Health will provide scientific information and technology transfer to resolve ecosystem health issues associated with increased pressures on the coastal environment from oil spills, land runoff, introduction of animal pathogens with trade, and increased population growth. The center will conduct interdisciplinary research to overcome issues related to human health, ecosystem health, and the animal health constraints to the development of marine aquaculture. The goals of the Center are: (1) To protect seafood consumers and living marine resources from epizootics of indigenous and nonindigenous agents of disease that may be introduced from aquaculture, from ship ballast water, or from imported raw seafood products. To gain an understanding of the biology and epidemiology of pathogens important to marine resources. To provide information on identification and control of natural epidemics of mortalities of marine organisms. (2) To accelerate the development of marine aquaculture through an emphasis on biosecurity, stock health, and environmental stewardship. To gain an understanding of the influence of pathogens important in marine aquaculture. To provide expertise on quarantine and establishment of Specific Pathogen Free-based marine aquaculture. To provide information and advice on disease diagnosis and control in support of marine aquaculture. (3) To evaluate and enhance the environmental health of the Gulf of Mexico through a better understanding of marine toxins, including oil related products and their mechanisms of action, and to develop interventions and remediation strategies. To provide expertise, information, and advice on environmental contaminants to industry and governmental agencies. The project will build state-of-the-art facilities and assemble a team of outstanding scientists and technical personnel from the academic, government, and private sectors to focus on the study of diseases of marine organisms, diseases of humans conveyed by the marine environment, and marine environmental health, including seafood contamination. The center will provide expertise to evaluate diseases in wild aquatic organisms as monitors of the health of ecosystems. Furthermore, in order to make informed corporate and regulatory decisions, a real need exists by industry and governmental agencies for data on potentially toxic environmental contaminants. Location (City, County): GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): __$6 million (3 yrs) _____ Annual Operation & Maintenance Cost (# years): ___$2 million (7 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Implementation of this project will address the key RESTORE priority areas of restoration, mitigation of insults caused by toxins and pathogens, and economic development. The project will build capacity for federal and private funding to sustain the Center after project completion. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The assumption of a leadership role by Mississippi through the Center in the prevention, control, and treatment of diseases of marine organisms and enhancement of environmental health will assure a long-term economic return for industry, a stable and sustainable economic base, and an enhanced quality of life and health for all citizens along the U.S. Gulf coast. â€¦	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 6.00	$ -	
	Research and Education	1827	5/13/2014	Analysis of the productivity dynamics and ecosystem health of the Gulf of Mexico using the sentinel species Gulf menhaden	: The Gulf of Mexico (GOM) is a dynamic and productive region that provides a variety of ecosystem services. However, it is subject to a range of chronic and episodic natural and anthropogenic impacts. In order to understand what ecosystem targets managers should strive to attain, an understanding of the long-term ecosystem conditions is necessary. In this proposal, an informative indicator of ecosystem health will be developed using Gulf menhaden (Brevoortia patronus) as a sentinel species. NOAA Fisheries, in cooperation with the commercial fishing industry, maintains a biological archive of Gulf menhaden scales (1964 to 2012, approximately 4,600 to 16,800 for each year). We will analyze these scales by subsampling the scales and determining their temporally and spatially specific stable isotopic signatures of carbon 13, nitrogen 15, and oxygen 18. Using this information we will reconstruct the historic productivity and temperature cycles in the GOM. Because of the applicability of this information to management, academicians, industry, and conservation representatives, the deliverables of this work are expected to have a broad, immediate, and profound impact. One application of the ecosystem health indicator will be to understand the external drivers of fishery dynamics. For example, both the blue crab stock and the gulf menhaden stock exhibit a reduction in productivity in 1995. It is likely that these departures indicate a â€œregime†shift in the environment. The proposed analysis would be invaluable because the relatively poor fits of many assessment models remain a substantial hurdle in the management process, such analysis will be improved with ecosystem information. Location (City, County):Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $487,286 per year (6 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple resource foci by expanding fishery monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and furthering the understanding of community and ecosystem ecology. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers. Improvements in fisheries management will lead to improved assessments and lessen the need for precautionary management that limits the economic value of fisheries. â€¦	Jackson	Yes	Yes	No	No	No	No	No		No		$ 2,923,716.00	$ -	
	Research and Education	1829	5/13/2014	Cumulative Imacts Assessment Tool for Ecosystem Based Management	As multiple restoration projects are implemented in the northern Gulf of Mexico, there is a need to understand and quantify impacts on the ecosystem. While positive impacts are most likely, there is risk that interactions across projects may have â€œunintended consequencesâ€. For example, changes in water quality such as salinity and sediment load may adversely impact desired habitat conditions. Consequently, a method that informs ecosystem based management is needed. This proposal is to develop and deploy a placed-based cumulative impacts assessment tool (CIAT) for scientific assessments of synergistic interactions of multiple restoration projects. The CIAT will be built using existing technologies and data for conducting scenario analyses and simulations. The CIAT will allow managers to evaluate impacts of multiple projects on the overall quality of the ecosystem in the northern Gulf of Mexico and provide science based assessments for adaptive management as restoration projects develop over time. Additionally, enhanced assessment techniques will be used to evaluate the stability and sustainability of individual projects during construction and post construction. The project will be a collaborative effort with engineers and scientists from Mississippi State University (MSU) and the University of Southern Mississippi (USM) and will be coordinated with state and Federal agencies conducting restoration in the northern Gulf of Mexico. Emphasis will be placed on projects in the Mississippi Sound and Lower Mississippi River. This proposal includes two major tasks 1) development and deployment of a cumulative impacts assessment tool (CIAT) that includes project information and simulation capabilities for assisting management and 2) enhanced observations using a variety of platforms (satellite, aerial, water borne (surface and subsurface), and field measurements) to assess project stability and sustainability. This combined approach will allow for adaptive management, incorporation and interaction with other assessments (e.g., MsCIP), and provides a mechanism for public interactions. Recent and ongoing studies conducted by the Northern Gulf Institute (NGI) (www.NorthernGulfInstitute.org) provide a wealth of information on physical, chemical, and biological processes in the northern Gulf of Mexico. For example, NGI has established hydrodynamic models with ecological modeling capabilities for Bay St. Louis, MS and the Mississippi Sound (Camacho and Martin, 2012, McAnally et al., 2012). These models provide capabilities for Integrated Ecosystem Assessments (IEA) and are part of the ongoing NOAA IEA program. They are also compatible with hydrodynamic models such as ADCIRC, FVCOM, and CH3D which have been applied in the region. This approach is also directly applicable to the Gulf of Mexico Alliance, Ecosystem Integration and Assessment Priority Issues Team. Additionally, NGI has developed and utilized Sulis, a decision support system, for activities such as regional sediment management in Mobile Bay (McAnally and Parson, 2011) and ecosystem management in the Mississippi Sound (McAnally et al., 2010) that can be utilized for place-based cumulative impacts assessment tool and project management. The NOAA Gulf of Mexico team has adopted Sulis for use in integrated ecosystem assessment. Additional information is provided as an attached document.	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 7,500,000.00	$ -	
	Research and Education	1830	5/13/2014	Crafting a mechanistic functional indicator of hypoxia and ocean warming	The proposed project will contribute to a functional explanation of responses by benthic organisms to changing and interacting gradients of dissolved oxygen and temperature, stressors associated with two primary coastal health concerns, namely hypoxia and climate change. Furthermore, this research will take the next logical step toward producing a functional indicator of hypoxia for coastal estuarine ecosystems. The research questions are founded on the premise that macrobenthic population responses to organic enrichment and hypoxia should entail a number of mechanistic links to individual organisms in terms of their bioenergetic capacity to respire, consume, and allocate energy. Experiments will be performed using various body sizes of several prevalent benthic polychaete taxa. In addition to acute mortality, chronic effects in terms of autecological processes, including aerobic and anaerobic respiration, tropho-energetic parameters, as well as growth and degrowth rates will be quantified at various combined levels of dissolved oxygen (DO) and temperature. Information gleaned from lab experiments will be synthesized within the context of an incipient hypoxia mass balance model (HMBM) to examine how autecological processes would interact to elicit temporal changes in biomass-size distributions under alternative scenarios of DO and temperature. Model simulations will be compared to benthic samples in conjunction with continuous water quality data. In addition, incorporating parameter estimates within the HMBM will help to assess the feasibility and applicability of developing a functional indicator that can be mechanistically explained through autecological processes. An ultimate goal is to craft a model which can apprehend how effects of hypoxia and warming affect trophic transfer potential to important fisheries species, such as brown shrimp. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 (4 years) (actual budget depends on the amount of salt marsh restoration activity involved) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project addresses multiple RESTORE and GoCoast key and priority focal areas, and will compliment anticipated substantial investments of RESTORE funds into understanding ecosystem consequences of hypoxia. The proposed project will interface directly with resource management agencies and NGOâ€™s in the region in order to disseminate the findings from this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This project will engender many indirect economic benefits that follow from ecosystem services associated with ensuring healthy coastal ecosystems and essential fish habitat, including the promotion of sustainable seafood harvest and production, recreational fishing activities, and associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	

	Research and Education	1831	5/13/2014	Artificial reefs and hypoxia: examining linkages and effects on reef fish populations	Artificial reefs are commonly built to create fish habitat in hopes of increasing fish stocks. The Mississippi DMR has created many shallow reefs within Mississippi Sound using concrete rubble and oyster shell. Further offshore, a dozen offshore reef sites (fish havens) ranging in size from 8 to 10,000 acres have been established. Ongoing research on nearshore artificial reefs in Mississippi Sound show that the biofilm, a diverse community of microbes and invertebrates, that colonizes these surfaces are net heterotrophic and have a high biological oxygen demand, yet hypoxia rarely develops on these shallow reefs due to shallow waters and high water column mixing rates. The offshore reefs are deeper (50-100 ft) and located in a region where the water column is stratified during the summer. This stratification combined with riverine nutrient inputs leads to bottom water hypoxia. Biofilm found on large offshore reefs will increase the biological oxygen demand and may contribute to hypoxia. We propose to examine the oxygen and nutrient dynamics of 5 offshore artificial reefs and at 5 non-reef sites over a 4 year period to determine if artificial reef sites are more susceptible to hypoxia relative to the non-reef sites. Stable isotopes of the major nitrogen species will be examined to determine the sources of dissolved nitrogen. Fish populations at each site will also be surveyed by underwater video collected by members of the Mississippi Gulf Fishing Banks (who frequently dive these sites) to determine effects on reef holding capacity. Bottom hypoxia associated with artificial reefs could deter the recruitment of juvenile fishes, which seek out reef habitats after settling from the plankton. Fish early life stages will be surveyed to examine evidence for fisheries production (eggs), as well as hypoxia-mediated relationships between larval supply (pelagic larvae) and settled recruits (juveniles). Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1.419,000 (4 years - $355K/year) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research fulfills many RESTORE/GoCoast priorities: expanding fisheries monitoring for Mississippi offshore waters, building local expertise, creating partnerships, and implementing ecosystem-based management. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Three graduate students will be trained on highly technical methods used for this project. In addition, local charter boats arranged through the Mississippi Gulf Fishing Banks organization will be employed for much of the sample collections. â€ƒ	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,419,000.00	$ -	
	Research and Education	1832	5/13/2014	A management strategy evaluation for assessing coastal habitats and ecosystem services in the northern Gulf of Mexico	The coastal continental and island habitats in the northern Gulf of Mexico (GOM) are subject to a range of chronic and episodic impacts. In order to maintain the health of these ecologically critical habitats, while balancing the needs of stakeholders, a management framework that considers the complex social, economic, and biological tradeoffs when considering various management options is necessary. We will conduct â€œrapid assessmentsâ€• of habitats in the northern GOM and quantify the biological, chemical, geological, and cultural status of these areas. The Coastal Ecology Group at the Gulf Coast Research Lab is uniquely positioned, because of their broad expertise, to perform this work. This multi-disciplinary investigation of the northern GOM habitats will be combined with published information to provide a comprehensive inventory of northern GOM ecosystem structure and function. Given this information, we will use management strategy evaluation (MSE) to provide decision makers a framework to understand how the imposition of alternative management strategies will alter the function of coastal ecosystems. The MSE framework will provide decision-makers and stakeholders with the tools necessary for long-term planning and help ensure healthy and sustainable coastal ecosystems. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $467,375 per year (8 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple foci including: Seafood (eco-restoration, habitat research), Research and Education (research capacity, partnership building, ecosystem-based management, critical habitat monitoring). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers for long-term planning. â€ƒ	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,739,000.00	$ -	
	Research and Education	1834	5/14/2014	Mississippi Fisheries Oceanography, Monitoring and Assessment Program (MFOMAP)	Variability in the recruitment of marine fishes to adult populations is largely related to the variability encountered in vital rates (e.g., growth, mortality) during the egg and larval stages. An understanding of this natural variability (environmental "background noise") will allow us to assess and predict the impacts of large perturbations (e.g., oil spills, tropical storms and hurricanes, and climate variability) on the marine fisheries resources of Mississippi. The overall goal of the Mississippi Fisheries Oceanography, Monitoring and Assessment Program (MFOMAP) is to collect long-term baseline data to understand the nature of nearshore and coastal environmental factors as they relate to fisheries production. The core component of this program will be monthly surveys to target the early life stages of marine fishes (eggs, larvae and juveniles) and decapods (megalopae, zoea), along with their zooplankton predators (e.g., gelatinous zooplankton) and prey (e.g., copepods). In addition, the physical environment will be characterized through field-based sampling (e.g., salinity, temperature, nutrients, dissolved oxygen). This ecosystem-based, "physics-to-fish" approach will utilize advanced sampling techniques, including a multinet plankton-environmental sampler (e.g., MOCNESS or BIONESS) and an In Situ Ichthyoplankton Imaging System (ISIIS), to characterize the abundances, distributions, and seasonality of planktonic assemblages. Specific objectives for the MFOMAP will be to: 1) provide data and support for DMR science and management goals; 2) provide guidance for fisheries recovery and restoration efforts related to Deepwater Horizon; 3) establish a regional center of expertise for fisheries oceanography and plankton research; 4) provide research opportunities and training for our next generation of marine scientists and taxonomists; and 5) enhance awareness through continued community outreach and education. This program will provide a spatial and temporal expansion to the existing NMFS long-term plankton program (SEAMAP) that samples federal waters. The SEAMAP plankton database is the primary data source for the federal NRDA, and therefore a state complement would benefit Mississippi-specific assessments in the future. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $645,750 total (10 years) Annual Operation & Maintenance Cost (# years): $1,410,000/year (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? : The project fulfills multiple RESTORE priorities by expanding fisheries monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and conserving commercial and recreational species (along with the jobs and industries they support). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project is labor intensive, highly technical, and therefore provides an excellent opportunity to employ and train personnel at multiple education levels. Anticipated personnel include BS- and MS-level technicians (n=6), high school and undergraduate interns (n=2), graduate students (n=2), data management support (n=1), and PhD-level researchers (1 postdoctoral associate, 2 principal investigators). â€ƒ	Jackson	Yes	Yes	No	No	No	Yes	Yes	30	No	monitorin	$ 2,055,750.00	$ -	
	Research and Education	1835	5/14/2014	Ecological assessments and development of fisheries-independent data and environmental indices for offshore pelagic habitats	Oceanic ecosystems are open systems where biological components are connected through complex interactions of life history strategies and physical processes. The distribution of floating Sargassum in the northern Gulf of Mexico and the spatial/temporal variability associated with the Loop Current are prime examples of these processes. Floating Sargassum represents an oasis of biogenic habitat in an otherwise featureless (habitat-deprived) ocean, and thus serves as critical habitat for resident and transient fishes, invertebrates, and sea turtles. Larval and juvenile stages of recreationally and commercially important species (e.g., tripletail, grey triggerfish, bluefin tuna, mahi mahi, wahoo, billfishes) use Sargassum habitats as nursery areas, as do the early life stages of important forage fish species (e.g., flyingfishes, hallbeaks) that serve as prey for many sportfishes. Similarly, frontal boundaries associated with the Loop Current and its associated eddies and filaments are spawning "hot spots" for tunas, billfishes and other large pelagics. The overall goal of this study is to examine the ecology and nursery habitat function of pelagic habitats, with an emphasis on Sargassum aggregations and Loop Current-derived features. Specific objectives of the project are to: 1) develop collaborations with colleagues at USM/DMS to ground-truth remote sensing observations and characterize the local and gulfwide extent/variability of Sargassum and Loop Current features; 2) characterize seasonal and interannual variability in larval and juvenile fish assemblages associated with these features; 3) characterize variability in food web dynamics and "nursery" functions associated with these features; 4) develop regional (Mississippi) and Gulf-wide predictive models of Sargassum distribution and biomass based on shipboard and remote sensing observations; and 5) develop larval and juvenile fish indices (for inclusion in stock assessments) "weighted" by information gained on fish associations with Sargassum and Loop Current features. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,124,000/year (5 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple RESTORE and GoCoast priorities by expanding fisheries monitoring for Mississippi offshore waters, building local expertise, creating partnerships, implementing ecosystem-based management, developing novel habitat mapping tools, promoting research and education initiatives, and conserving commercial and recreational species (along with the jobs and businesses in Mississippi these resources support). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The proposed work is labor intensive, highly technical, and therefore provides an excellent opportunity to employ and train personnel at multiple education levels. Anticipated personnel include BS- and MS-level technicians (n=4), graduate students (n=2), and senior/PhD-level researchers (1 postdoctoral associate, 3 principal investigators). â€ƒ	Jackson	Yes	No	No	No	No	Yes	No		No	monitorin	$ 5,620,000.00	$ -	
	Research and Education	1836	5/14/2014	Salt Marsh Restoration - Functional Equivalency Assessments	: In light of damages to salt marsh resources following the DwH oil spill, it is anticipated that substantial efforts will soon be focused on restoring salt marsh habitats within the northern Gulf of Mexico region. In order to track the recovery of ecosystem services and function of restored salt marshes, and to properly assign credits in terms of ecosystem and economic value, Pi‚€™s associated with the USM GCRL Coastal Ecosystems Group (CEG) and Center for Fisheries Research and Development (CFRD) propose to conduct follow-up integrated assessments of the functional equivalency of newly restored salt marsh habitats. Unfortunately, once saltmarshes have been created there is very little known on how they function, especially at various levels of organization. The proposed project addresses the assessment of created salt marshes in terms of marsh function using an integrated approach involving: primary production, benthic secondary production, nekton abundance, and biogeochemical perspectives. In a previous study funded by Tidelands conducted by the PIs in 2005, various quantitative assessment metrics were developed. In this proposed study we will compare newly created marshes with reference sites over a time trajectory in order to establish at what ages the created marshes function equivalently to a natural marsh. Ecosystem compartments will include saltmarsh vegetation, infaunal and epifaunal invertebrates, nekton, and larger transient fishes, as well as nutrient and organic matter concentrations in the pore water and in the particulate phase, and stable isotope signatures of selected organisms at various trophic levels to assess the progression of change in the trophic structure of restored marshes relative to that representing natural reference conditions. Focal sampling for most of the metrics will be encompassed by replicate throw trap samples, from within which various other samples will be taken. Location (City, County): Ocean Springs, Jackson Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,000,000/year (8 years) (actual budget depends on the amount of salt marsh restoration activity involved) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project addresses multiple RESTORE and GoCoast key and priority focal areas, and will complement anticipated substantial investments of RESTORE funds into salt marsh ecosystem restoration. The proposed project will interface directly with restoration projects in the region in order to monitor and document the attainment of normal salt marsh function. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This project will support the workforce involved with upcoming salt marsh restoration activities within the region. In addition, many indirect economic benefits will follow from ecosystem services associated with ensuring healthy salt marshes and essential fish habitat, including the promotion of sustainable seafood harvest and production, recreational fishing activities, and associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 8,000,000.00	$ -	

	Research and Education	1837	5/14/2014	Determination of the landscape resilience of saltmarshes to crude oil across gradients of riverine inputs and wave energy	The complexity of oil natural removal processes makes the spatial variability of oil residues onshore very high, leading to uncertainty as to how coastal wetlands, influenced by wave, tide and freshwater inputs, will recover from oil spill events among other affecting factors. We propose to study the changes of coastal wetland habitats affected by crude oil over time (4-7 years) at multiple spatial scales, from individual vegetation, to site characteristics of vegetation, to landscape, as a continuation of our NSF RAPID project (award number: DEB-1048342) and Northern Gulf Institute Phase I BP Oil Spill Research (Task order # 191001-306811-04/TO 001), but we propose to switch the focus to longer-term dynamics and larger spatial coverage. A central hypothesis will be tested: coastal wetlands recover faster in the high energy shoreline or with high freshwater inputs than in the lower energy shoreline or when with low freshwater inputs. Based on our short-term data (one year), we have found that photosynthesis in saltmarshes recovered within 4-6 months in the high energy shoreline while photosynthesis was still depressed in the low energy shoreline after one year. We will develop a hierarchical Bayesian (HB) model to integrate data we have already obtained and data that we will obtain at multiple spatial-temporal scales to study the impact by species, individual stress (individual scale), temperature, salinity, elevation (site scale), wave energy, freshwater inputs, distance to shoreline, historical loss rates (landscape scale), as well as initial oil impact level and oil residual (site scale), on vegetation characteristics at the individual (optimum quantum yield of the vegetation: Fv/Fm, and stem height), site (stem density and biomass) and landscape scales (represented by landscape metrics such as patch density and contiguity index distribution, etc.) over time in the contrasting environments. The HB model can simulate complex systems by decomposing the high-dimensional problem into levels of data model, process model, parameter and hyper-parameter within a fully consistent framework (Clark 2005). It allows for multiple sources of stochasticity including uncertainty in latent variables and parameters, and variability from fluctuations not explained by deterministic processes (Clark et al. 2001). Location (City, County): Administrative site: GCRL, Ocean Springs; field sites: saltmarshes in Jackson, Harrison and Hancock Counties Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $360,000 per year (4 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project will provide information on coastline sustainability and improved guidance for developing optimal approaches to saltmarsh restoration. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will provide opportunities to train graduate students in landscape biology and modeling and provide information to coastal zone planers to optimize economic development while retaining ecological integrity. References: Clark J.S., 2005. Why environmental scientists are becoming Bayesians. Ecology Letters 8, 2-14. Doi: 10.1111/j.1461-0248.2004.00702.x.; Clark J.S., Carpenter S.R., Barbar M., Collins S., Dobson A., Foley J.A., Lodge D.M., Pascual M., Pielke Jr. R., Pizer W., Pringle C., Reid W.V., Rose K.A., Sala O., Schlesinger W.H., Wall D.H., Wear D., 2001. Ecological forecasts: an emerging imperative. Science 293, 657-660. â€ƒ	Jackson, Harrison, Hancock	Yes	No	No	No	No	Yes	No		No		$ 1,440,000.00	$ -	
	Research and Education	1838	5/14/2014	GCRL/MEC educational vessels program replacing the R/V Hermes	The R/V Hermes was built in 1955 and has been a workhorse vessel for GCRL ever since. Its primary mission has been to support the field needs of the Marine Education Program. However, the R/V Hermes has limited capacity and growth of the MEC now requires additional vessel support to provide multiple programs daily field access. GCRL/MEC will seek $200,000 to purchase two pontoon boats, each of which will have the capacity to transport a class of 30 students with educators/chaperones to the barrier islands. GCRL/MEC is developing a long-term plan to provide field-based coastal science programs for all 5th, 8th, and 11th grade students in the coastal region. In order for each student to have an educational experience on the water, new educational vessels and increased carrying capacity will be needed. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $200,000 Annual Operation & Maintenance Cost (# years): GCRL manages its entire vessel fleet on a cost recovery basis. We anticipate usage, invoiced under a day-rate schedule plus fuel, to cover the costs of crew, at-sea use, equipment upgrade, and yearly maintenance. How will this leverage with other RESTORE priority areas or non-RESTORE funds? These new vessels will allow the MEC to expand educational programs, funded by the RESTORE Act. In addition, the GCRL/MEC will be able to develop additional programs with these vessels serving a range of educational needs from teacher training to undergraduate education to educational modules for middle and high schools. This project could fit under any of the buckets under the RESTORE Act funding streams because the vessels will be used to further the educational goals of the Act. It is also meets an important goal of Mississippiâ€™s Go Coast 2020 plan under the Research and Education section: â€œOutreach programs to increase public awareness and understanding concerning the ecological and economic importance of a healthy, sustainable Gulf of Mexicoâ€ (page 64). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): An educated workforce capable of providing economic expansion consistent with the ecological realities of the Gulf coast begins with education of students and their teachers in a field-based hands-on curriculum. The MEC targets all age groups but focuses on middle school to undergraduates where intensive field exposure will be retained as learned understanding of the ecological resources of the Gulf coast and their husbandry. â€ƒ	Jackson	Yes	No	No	No	No	No	Yes	100	No		$ 200,000.00	$ -	Equipment development and purchase
	Research and Education	1839	5/14/2014	Modernization of GCRLâ€™s research infrastructure on the Halstead Campus	GCRL physical plant is not modern and so is energy inefficient, has inadequate backup generator power, and supports several buildings with modern-day uses very different from the original design intentions. Of particular importance is to reduce the energy footprint for the campus. In addition, the GCRL boat basin has not been renovated since prior to Hurricane Katrina. The following projects would substantially modernize the Halstead Campus. 1.Upgrade of electrical, air conditioning, and generator capacity for Caylor. Much of the lower level wiring is aging prematurely due to submersion in saltwater during Katrina. Generator capacity is gravely inadequate. The air conditioning and heating units should be replaced with modern energy-efficient power plants. 2.Upgrade of electrical, air conditioning, and generator capacity for the Research Building. Much of the lower level wiring is aging prematurely due to submersion in saltwater during Katrina. Generator capacity is gravely inadequate. The air conditioning and heating units should be replaced with modern energy-efficient power plants. 3.The Directorâ€™s house, originally a home, now serves as an administrative unit. Efficient use of the facility requires renovation to e.g., remove the kitchen and replace it with office space. Movement of GCRL administration in total to this facility would open up badly needed office space for faculty and graduate students in the Oceanography Building. 4.The old toxicology building will be replaced by a new building sited on the Cedar Point Campus. Renovation of the old building to convert it into a modern laboratory and office facility will permit expansion of the Fisheries and Ecosystems Research groups. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $1.920 million Annual Operation & Maintenance Cost (# years): GCRL supports full maintenance, utilities, and custodial services for these buildings. GCRL anticipates that the renovations will reduce, not increase, these costs resulting in a long-term cost savings to GCRL. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects the renovations to support a wide range of science programs aimed at fisheries, coastal restoration, ecosystem and landscape biology, and marine diseases, among others. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit GCRL to upgrade its physical plant and reduce its cost of operation. The facilities support a wide range of research programs affecting local, regional, and national economics by providing the location for a range of basic and applied research.	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 1.92	$ -	
	Research and Education	1840	5/14/2014	Redesign of GCRL Halstead Campus entrance, vehicular routes, and boat access	GCRLâ€™s main entrance is a road-based easement across a neighboring piece of property. Due to sealevel rise, this entrance is increasingly flooded preventing employees from attending work on some days and risking the entrapment of employees and students already on site. In addition, (1) a number of areas of severe erosion endanger the property and adjacent marshes. In addition, boat-ramp access by local boaters, provided under an MOU signed with the City of Ocean Springs, generates congestion without providing a positive experience of the visitor. Growth of the MEC program has saturated available student parking and resulted in high traffic use on old, poorly marked roadways. The main entrance, vehicular routes, and parking should be fully redesigned. This will entail the following steps. 1.Purchase of the adjoining property; 2.Redesign of Halstead vehicular traffic by moving the main entrance to higher ground and re-orienting roadways consistent with the new entrance; 3.Establishment of a new boat launch and parking facility near the present entrance; 4.Development of a landscaping plan including a swale to capture storm runoff and erosional materials along the near-shoreface from the new ramp to the boat basin; 5.Addition of trees to improve wind management; and 6.Construction of additional parking for students, staff, and faculty in the area where the present entrance road divides towards the boat basin. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $735,000 Annual Operation & Maintenance Cost (# years): GCRL expects little additional long-term costs above present-day upkeep of the present entrance, as landscaping will be low maintenance trees and shrubs; mowing the grass on the new property will be the only additional maintenance item. Ocean Springs has obligated funds to maintain garbage pickup and to provide police security in the public access areas. How will this leverage with other RESTORE priority areas or non-RESTORE funds? GCRL expects the renovations to support a wide range of science programs aimed at fisheries, coastal restoration, ecosystem and landscape biology, and marine diseases, among others, as well as the middle to high school and undergraduate programs of the MEC and graduate level courses taught by GCRL faculty. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit GCRL to maintain its research and education program in the face of rising sea level and restore the shoreface to a more natural habitat in keeping with GCRLâ€™s commitment to coastal restoration. The project will support tourism by promoting boat access for recreational boaters and fishermen in a portion of Ocean Springs where independent access is not available.	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 735,000.00	$ -	
	Research and Education	1841	5/14/2014	Design and construction of overnight lodging and expanded dining capacity supporting the Marine Education Center	GCRL offers a range of over-night and short-term lodging for visiting scientists, and visiting teachers and students participating in the various programs offered by the Marine Education Center. In 2013, the availability of overnight lodging was a direct determinant of the number of participants in the Marine Education Center programs, as all available beds were filled. An ongoing economic feasibility study shows the potential for the MEC to increase its current participant numbers to double its existing capacity with the addition of appropriate lodging on the Halstead Campus. The additional of lodging at Halstead will support continued expansion of our summer field camps and teaching programs and will also provide additional capacity for conferencing and retreat programs for small science professional and academic groups. Additionally, several of the MECâ€™s educational partners have indicated a similar need for appropriate housing compatible with their program audiences. These partners include The National Park Service, The Grand Bay National Estuarine Research Reserve, the Pascagoula River Audubon Center, the Ocean Springs Chamber of Commerce, the Mary C. Oâ€™Keefe Cultural Center and the Walter Anderson Museum of Art. Partnering with these organizations provides additional housing markets and professional program growth opportunities. The construction project proposed will at accommodations for 80. The GCRL dining facility is equivalently taxed. Maximum capacity has been reached on a number of occasions in 2013. Expansion of the MEC program will require an expanded ability to feed participants commensurate with the expanded lodging capability on the Halstead Campus. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $3.345 million Annual Operation & Maintenance Cost (# years): GCRL manages its lodging on a cost recovery basis. Day rates cover custodial, power, water, sewer, maintenance/upkeep, and bedding/furniture replacement. No additional financial resources will be required to support the expanded lodging capacity. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects that lodging will provide a vehicle to dramatically expand (a) our Marine Education program, (b) the use of our facility to accommodate professional groups participating in retreats and think tank programs, and (c) expanded outreach partnerships with e.g., The National Park Service, The Grand Bay National Estuarine Research Reserve, and the Pascagoula River Audubon Center. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit USM to dramatically expand its Marine Education, outreach, and professional enhancement programs. These activities will expand the view of Ocean Springs and surrounds as a location for professionals to go, thereby promoting tourism pertinent to the Ocean Springs plan. The Marine Education program has a record of providing graduate students to USM; this will expand. The educational program is itself an important financial engine for the local community and for the university; this too will expand. â€ƒ	Jackson	Yes	No	No	No	Yes	No	Yes	100	No		$ 3.35	$ -	

	Research and Education	1842	5/14/2014	Marine shrimp farming industry for Mississippi	Over ninety percent of all shrimp consumed in the United States is imported. Our current seafood deficit exceeds $10B annually. The focus of the Marine Shrimp Farming Industry for Mississippi program (MSFIM) will be the demonstration and transfer of closed system, biosecure production technology for marine shrimp to develop a marine shrimp farming industry in coastal Mississippi. Closed, biosecure shrimp aquaculture systems undergo little or no water exchange, which prevents disease transfer, prevents pollution discharge, and allows for production of marine species at locations which are not adjacent to the ocean, thereby protecting sensitive coastal land and creating unique economic opportunities. This technology has been in development for approximately 10 years at various research institutions, including the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory (GCRL). Through diligent research efforts the technology has reached a point where the private industry can adopt these techniques and put them to use. The goals of the program are, 1.To demonstrate the use of sustainable, biosecure shrimp culture technology in the prototype commercial facility at GCRL 2.To engage and educate potential and existing shrimp fishers, seafood retailers, consumers, and members of Gulf of Mexico coastal communities with regard to sustainable marine shrimp aquaculture. 3.To provide training and extension assistance to individuals interested in undertaking the culture of marine shrimp profitably and sustainably in south Mississippi Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $500,000 (1 year) Annual Operation & Maintenance Cost (# years): $1 million per year (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of a Marine Shrimp Farming Industry for Mississippi addresses economic and workforce development. The facilities for demonstration of the technology are already available and require only slight modifications. The methodology is well known and the expertise for technology transfer is immediately available at GCRL. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Construction will be minimal but the development of a marine shrimp farming industry in Mississippi will yield substantial job creation and economic opportunities. â€¦	Jackson	Yes	Yes	No	No	No	Yes	Yes	10	Yes		$ 5.50	$ -	
	Research and Education	1843	5/14/2014	Development of an Aquacultured bait industry for Mississippi	The project will provide research, development, and technology transfer to develop an aquaculture-based bait industry for south Mississippi. Many recreational fishermen were severely affected by a combination of Hurricane Katrina, the BP oil spill, and increased fuel costs. Not only have many for-hire owners and operators lost their livelihoods, but so to have deck hands and live bait suppliers. To help alleviate these seafood related job losses, we propose to develop of an aquaculture-based bait industry in south Mississippi. We will do this through a three-stage approach, 1) research and development, (2) technology transfer through training, and (3) onsite extension assistance. Four species are targeted, each at a different point in the technical development. Bull minnows are the furthest along and stages 2 and 3 can be implemented immediately. Gulf white shrimp, blue crabs, and croaker all need some technology development before implementation of stages 2 and 3. Training of local commercial fisherman will be accomplished through the design and construction of demonstration systems for the rearing of bull minnows in ponds at the Lyman Fish hatchery, and bait shrimp, crabs and croaker at the Cochran Marine Aquaculture Center at the Gulf Coast Research Lab. Training will include: 1) design and function of ponds and closed-system components (how to build a system), 2) importance of appropriate filtration and a rudimentary understanding of the nitrification process, 3) water quality parameters and how to measure them, 4) â€œneed to knowâ€ facts about the biology of the species being cultured, and 5) trouble-shooting the system. Certificates of Completion will be awarded to program participants that complete the training course(s). In addition to the certificates awarded, a dedicated technical support person will work with interested individuals to help them modify and upgrade their facilities. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $1 million (2 yrs) Annual Operation & Maintenance Cost (# years): $1 million (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of an aquacultured Bait industry for Mississippi addresses economic development. The facilities for implementation of the program are already available and require only slight modifications to the ponds at the Lyman Fish Hatchery and the Cochran Marine Aquaculture Center. Once the program is fully implemented there will be a sustainable industry developed. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Construction will be minimal but the development of an aquacultured bait industry will yield substantial job creation and economic opportunities.	Jackson	Yes	Yes	No	No	Yes	No	Yes	50	Yes		$ 2.00	$ -	
	Research and Education	1844	5/22/2014	Gulf of Mexico Marine Stock Enhancement and Restoration Consortium	Brief description of activities: We will develop a multi-state consortium to address scientific, hatchery-based restoration and enhancement of economically important marine finfish species potentially impacted by ecosystem degradation including the Deep Water Horizon oil spill. Using a structure template developed through previous grants from NOAA and the Mississippi Department of Marine Resources, we will mobilize partnerships among universities, state management agencies, and private enterprise Gulf-wide to 1) develop hatchery technology and capacity for production of selected economically important species and 2) use the fish produced to test and implement strategies for achieving science-based restoration and mitigation. Disciplines ranging from reproductive biology, genetics, larval rearing, nutrition, and health management to coastal and fisheries ecology and economics will be represented and address fundamental hypothesis-driven questions relevant to the pursuit of these goals. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County) with participants in all five Gulf states funded either by their respective states or from Federal RESTORE funds. Infrastructure cost (# years): $10 million over 5 yrs Annual Operation & Maintenance Cost (# years): $2 million per yr (10 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Mississippi component of the Gulf-wide consortium will be funded by Mississippi RESTORE funds. The component programs in each individual state will be funded by their respective statesâ€™s RESTORE funds. The complete consortium could be funded by the Federal share of the RESTORE funds. The consortium can be at least partially sustained over the long-term by user fees levied as part of commercial and recreational fishing licenses and taxes imposed on industry for use of public resources such as tidelands and waterways consistent with the Public Trust Doctrine. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): New hatchery capacity will require construction and materials. Active hatcheries, research programs, and enhancement activities will add jobs to the economy and facilitate the development of a skilled workforce.	Jackson	Yes	Yes	No	No	No	Yes	Yes	40	Yes		$ 30,000,000.00	$ -	
	Research and Education	1847	5/28/2014	Developing aquaculture for stock enhancement of economically important marine fishes of the northcentral Gulf of Mexico	Brief description of activities: The objective of the project is to develop the aquaculture and stock enhancement of marine fishes of importance to the Mississippi Gulf Coast. The project will be developed at the Thad Cochran Marine Aquaculture center (TCMAC) and will focus in a first phase on developing and optimizing technologies to (i) spawn and culture larvae and juveniles of selected marine species with a primary focus on red snapper and spotted seatrout, (ii) tag and release produced fish on natural and artificial habitats off the Mississippi coast, and (iii) monitor returns of released fish to the fishery. Protocols will be refined in subsequent years based on initial results in an adaptive strategy. The expected outcome is a contribution to the restoration of fisheries stock and an increase of recruitment and fishing opportunities in a stock enhancement program. As an example, the release of just 350,000 6-cm red snapper yearly would permit the allowable landings by Mississippi recreational fishermen to double over 2012 recorded landings. Production of red snapper at 500,000 released fish per year is readily achieved by present day GCRL facilities. The aquaculture technologies resulting from the project will allow development of industries producing these species for the food market and creating new jobs on the Gulf coast. The project will also investigate the feasibility of culturing new emerging species (e.g. tripletail, goliath grouper). The technologies will be made available to private entities investing in Marine Aquaculture and the center will support the development of industries through continued research, training and consulting. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $5,000,000/yr (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project builds on an existing partnership between USM and MDMR, partially funded by MDMR, to research stock enhancement of marine species. Stock enhancement will contribute to rebuild fisheries stock and will therefore be synergetic with efforts to restore recreational and commercial fisheries Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The aquaculture technologies that will be developed will be made available to initiate industries on the Gulf coast producing red snapper, spotted seatrout ,or other emerging species resulting in the creation of new jobs. The center will support the development of these industries by providing consulting and training of individuals engaging in marine Aquaculture. In addition, these releases can directly increase the allowable landings for the recreational fishery with concurrent significant economic effects within the tourism and fishing sectors of the coastal economy.	Jackson	Yes	Yes	No	No	No	Yes	No		Yes		$ 50,000,000.00	$ -	
	Research and Education	1848	5/28/2014	Gulf of Mexico tuna aquaculture program	Brief description of activities: Tuna are among the most valuable fishery species in the world and are subjected to heavy fishing pressure. In fact the Atlantic bluefin tuna stocks are severely overfished and stocks are declining at an alarming rate. The Gulf of Mexico is one of only two spawning areas for Atlantic Bluefin tuna and the BP oil spill coincided in time and space with their spawning and larval development on the breeding grounds. The development of aquaculture of tuna will significantly contribute to relieving fishing pressure on wild stocks and can contribute to rebuilding stocks through supplementation. Presently, tuna aquaculture is limited to the fattening of wild caught juveniles in cages. The constraints to development of aquaculture of tuna are a lack of captive broodstock spawning and larval rearing. The Gulf of Mexico Tuna aquaculture program will develop the facilities and technology for the captive reproduction and spawning of yellowfin and Bluefin tuna. Captive spawning yellowfin tuna have been successfully established in one facility on the Pacific Coast of Panama. We will transfer their methods to the Cochran Marine Aquaculture Center. Captive broodstock will be developed and work on the production of juvenile tuna for culture and stock enhancement will ensue. Subsequent to development of a captive population of yellowfin tuna for broodstock development, we will develop a captive population of Bluefin tuna and initate research on larval rearing that will culminate in the production of juveniles for release into the wild. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County) with participants in all five Gulf states. Infrastructure cost (# years): $5 million over 2 yrs Annual Operation & Maintenance Cost (# years): $2.5 million/yr (10 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The program will incorporate the expertise and facilities of the Gulf Coast Research Lab to develop aquaculture for tuna. The program will provide for economic development through development and expansion of marine aquaculture in coastal Mississippi. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): A new tuna broodstock facility will require construction and materials. Active hatcheries, research programs, and enhancement activities will add jobs to the economy and facilitate the development of a skilled workforce.	Jackson	Yes	Yes	No	No	No	Yes	Yes	15	Yes		$ 30,000,000.00	$ -	

	Research and Education	1849	5/28/2014	Red snapper stock enhancement in support of the recreational fishery of Mississippi	Brief description of activities: GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species for enhancing native populations. GCRL is now poised to develop and apply new marine aquaculture technologies for red snapper in support of coastal restoration, economic expansion, and fishery stock enhancement. Red snapper is one of the most sought-after recreational fish. Reduced federal quotas have significantly impaired profitability of the recreational for-hire industry, with economic impacts throughout much of the tourism sector of the Gulf coast. GCRL is at the forefront of developing intensive recirculating aquaculture of red snapper for stock enhancement. In fact, GCRL is the only institution in the world doing so. Accomplishments include release of over 5,000 juveniles in 2013 in support of rebuilding red snapper populations; and development of copepod production technologies for feeding red snapper larvae. Building on those successes, GCRL is poised to increase production of red snapper in 2013 â€" 2014. Estimates based on NMFS SEDAR assessment growth and mortality schedules for red snapper indicate that the release of about 350,000 red snapper at 6-cm size (about 0.5 years old) would produce enough legal size fish (16 inches) in three years to double the 2012 landings recorded for Mississippi recreational fishermen. The GCRL aquaculture program has the capacity to achieve this level of production with improvements in culture technology. In 2011 (last year of NMFS data), Mississippi saltwater anglers spent $149 million in taking over 1.6 million angler trips in the three coastal counties. Thus, the recreational fishery is an important source of tourism dollars for the coastal counties and red snapper is an important draw encouraging anglers to the coast. Doubling the landings would add significantly to the tourism value of this sector. This project would focus on that goal. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 per year with a minimal duration of 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Thad Cochran Marine Aquaculture Center at GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species. The $30 million investment by federal and state partners in the nearly 100,000 sq. ft. of research and development facilities provides state of the art facilities. DMR has been a strong supporter and funder of aquaculture through the Tidelands program. This support is anticipated to continue to provide the basic research to support this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishery of Mississippi is an important component of coastal tourism. This project will substantively support expansion of this sector so damaged by the BP oil spill. Increased landings will result in increased jobs in the shore-based businesses supporting recreational fishing, and also in hotels and restaurants providing food and lodging for anglers coming down to the coast to fish.	Jackson	Yes	Yes	No	No	Yes	No	No		Yes		$ 10,000,000.00	$ -	
	Research and Education	1850	5/28/2014	Improving fish stock assessment and management in the Northern Gulf of Mexico using food web dynamics	Brief description of activities: In the assessment and management of fish and invertebrate resources in the Gulf of Mexico (GOM), a major issue to stakeholders is how the surplus production of stocks should be allocated. In recent years, the priorities of managers have shifted to an ecosystem-based paradigm. In addition to allocating portions of biomass to the recreational and commercial sectors, decisions must be made about how to allocate fish to ensure ecosystem function. It is only with an increased knowledge of the ecological roles of predators and prey populations, that managers can ensure vibrant, economically sustainable fisheries, as well as promote ecosystem resilience. The goal of this project is to collect and analyze the diet compositions of fish resources throughout the northern GOM. We will partner with GOM statesâ€™ resources agencies and expand the capacity of Mississippiâ€™s fish sample program. The objectives of this project are to expand and explicitly implement ecosystem-based fishery management in the GOM by 1.) Describing the productivity dynamics in the northern GOM from zooplankton to the highest trophic levels of fish species using isotopic, fatty acid, and stomach content analysis; 2.) Evaluating the spatial and temporal patterns in diet among the multi-species fish community in the GOM; 3.) Providing a comprehensive understanding of the natural resources used by managed and incidentally caught fish stocks; and 4.) Directly implementing this information into sock assessment and management policy by communicating the results of the studies to industry and NGO stakeholders. Location (City, County): Ocean Springs, Jackson county Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $606,933 per year for 6 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple resource foci by expanding fishery monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and furthering the understanding of community and ecosystem ecology. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers for long-term planning. aCf	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,641,598.00	$ -	
	Research and Education	1851	6/3/2014	Impact of climate variability on population dynamics of estuarine, reef and offshore pelagic fishery species.	Brief description of activities: Oceanic-atmospheric modes of variability from the Atlantic and Pacific Oceans have been linked to meteorology, hydrology, abundances of estuarine fishery species (shrimp, blue crab and gulf menhaden), and zooplankton biomass in the northern Gulf of Mexico (GOM). The proposed study will examine the influence of climate-related meteorological and hydrological regimes on northern GOM inshore and offshore nursery habitats which, in turn, affect population dynamics of estuarine and marine species within the region. Biological collections of ecologically and economically important species and associated environmental data from historical fisheries monitoring programs in the northern GOM will be the source of study materials for the project. Target species will include coastal and oceanic pelagic fishes (mackerels, tunas, billfishes, dolphinfish), reef fishes (snappers, groupers, trigger fishes) and estuarine species (gulf menhaden, red drum, shrimp and crabs). Among contrasting climate-related meteorological and hydrological regimes, comparisons will be conducted for nursery habitat characteristics; abundance, dispersal, recruitment, age and growth of pelagic and reef fish larvae; and predator/prey dynamics of estuarine species. Based on the timing of biological collections, numerical models will be used to simulate climate-dependent oceanographic features, flooding conditions in estuarine habitats, and passive transport of offshore larvae (drift pathways). Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,200,000 (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed study addresses RESTORE priorities relevant to ecosystem-based management, coastal ecosystem forecasting and modeling, ecosystem ecology of commercial and recreational species, resource management, and public education and outreach. The project will contribute to greater scientific understanding of ecosystem function and condition in terms of factors regulating population levels of ecologically and economically important species in the region, leading to improved resource management decision-making. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The results of this project will benefit: 1) the scientific community in efforts to understand the population dynamics of northern GOM coastal and offshore living resources, 2) state and federal fishery managers and decision makers charged with resource restoration, management and conservation programs, 3) fishing industries and 4) tourism enterprises.	Jackson	Yes	Yes	No	No	No	No	No		No		$ 1,200,000.00	$ -	
	Research and Education	1852	6/3/2014	Establishment of an effective biomonitoring program to assess and protect coastal fisheries	Brief description of activities: Rapid and accurate assessment of the health status of coastal fishes is a vital component of fisheries management, environmental monitoring, and eco-restoration efforts. Many anthropogenic contaminants from sewage outfall, coastal runoff and accidental release events accumulate in estuarine and marine sediments, leading to increased exposure of sediment-associated species to both higher doses and longer durations than pelagic or planktonic species. Benthic fish species are reliable indicators of overall ecosystem health, and function as sentinel organisms in the event of unanticipated release events. We propose to establish a biomonitoring program that will examine key indicators of toxic and endocrine-disrupting contaminant exposure in two representative benthic species: southern flounder and Atlantic stingray. The Toxicology and Molecular Physiology Laboratories at GCRL are uniquely qualified to monitor validated indicators of exposure, i.e. general stress (immunocompetence, stress steroid hormones), toxin and heavy metal exposure (liver histology, expression of contaminant-induced genes cyp1a and mt), and endocrine disruption (ethinylestradiol, expression of induced genes cyp19 and vtg). Fish will be collected monthly at three stations selected to monitor Biloxi Bay, Davis Bayou and Pascagoula Bay. The fish will be assessed for evidence of anthropogenic impacts using the bioindicators listed above. Consistent monitoring of these species at the same stations over time will serve to protect and maintain healthy coastal ecosystems by: 1) Determining the natural spatial and temporal variability among exposure indicators in GOM sentinel species to aid in management decisions; 2) Establishing un-impacted baseline values to facilitate rapid analysis of impacts from future release events such as Deepwater Horizon; 3) Rapidly identifying areas that are transiently or seasonally impacted by anthropogenic impacts; and 4) Providing a mechanism for identifying unreported or unknown release events. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $336,000/year (5 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project will leverage several additional RESTORE and GoCoast priority areas by providing data that are directly applicable to seafood quality, tourism (recreational fishing), fisheries management, and healthy water resources. Data and outcomes from this program will be used to support proposals for continued funding beyond RESTORE support including federal sources, e.g. NSF LTER. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This project will employ and train highly technical laboratory staff, increasing local resources and technical expertise in the state of Mississippi.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,680,000.00	$ -	
	Research and Education	1853	6/3/2014	Gulf of Mexico large pelagic fishes tracking program	Brief description of activities: Large pelagic fish species, such as blue marlin, sailfish, bluefin tuna, and yellowfin tuna, inhabit offshore waters of the Gulf of Mexico and often undertake extensive migrations to accommodate various life-history requirements, crossing multiple management jurisdictional boundaries in the process. These species are of significant ecological and economic importance, yet management measures for sustainability of their stocks are often insufficient due to the lack of scientific data, including habitat use and migratory trends. The proposed program would use satellite tag technology as a viable scientific approach for the assessment of habitat preferences and movement patterns of large pelagic fishes, thereby enabling the integration of these data with species-specific biological factors. Use of satellite tags will aid in better defining management jurisdictions specific to each species and will provide a baseline for assessing future episodic events in the marine environment, such as deepwater drilling accidents, that may impact these stocks. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $250,000 annually for 10 years Annual Operation & Maintenance Cost (# years): $475,000 annually for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed program addresses multiple RESTORE and GoCoast key focus areas, including Eco-Restoration, Seafood, and Research & Education, and pertains to specific priority items for: Seafood Research; Fisheries; Ecosystem-based Management; and Comprehensive Observation, Monitoring and Mapping. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Informed management of natural resources will promote sustainable seafood harvest and production and recreational fishing activities and subsequently benefit associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	Yes	50	No		$ 7,250,000.00	$ -	

	Research and Education	1854	6/3/2014	Quantitative fisheries assessment program	Brief description of activities: Proper fisheries management relies on quantitative assessments of exploited stocks to safeguard against overfishing and depletion of fishery resources. Maintaining the long-term productivity of fished stocks ensures a vibrant and sustainable economic base. Quantitative assessments inform management decisions to restore overfished or otherwise impacted stocks to sustainable levels, thereby creating exploitable production levels for commercial and recreational user groups. Traditional management has relied on single-species assessments utilizing data obtained from the various fishing sectors along with independently collected scientific data for target species. There is growing interest in the implementation of ecosystem-based assessments, which consider, among other things, trophic relationships, competitive interactions and environmental stressors and drivers in assessing the status of individual species and associated ecological components. This proposed program will support a combination of traditional single species assessments and the development of ecosystem based models for highly valued stocks, such as spotted seatrout, red drum, blue crab, eastern oyster and Gulf menhaden. The program will also identify and address data gaps and deficiencies in current sampling programs so that data inputs are readily available for model runs. The resulting assessments and management recommendations will provide a science-based foundation for the proper and continued management of Mississippi and associated regional fisheries to optimize the economic benefit of those resources. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $215,000 annually for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed program addresses multiple RESTORE and GoCoast key focus areas, including Eco-Restoration, Seafood, and Research & Education, and pertains to specific priority items for: Seafood Research; Fisheries; Ecosystem-based Management; and Comprehensive Observation, Monitoring and Mapping. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will lead to improved management of the Stateâ€™s natural resources and thereby promote enhanced seafood harvest and production, expanded recreational fishing activities, and associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,150,000.00	$ -	
	Research and Education	1855	6/3/2014	: Development of a recreational fishery initiative within SCeMFiS (Science Center for Marine Fisheries)	Brief description of activities: The Science Center for Marine Fisheries (SCeMFIS) is a National Science Foundation (NSF) Industry & University Cooperative Research Center (I/UCRC) housed at GCRL which provides academic resources to fishing businesses throughout the Gulf coast. I/UCRC centers are designed by NSF to provide the opportunity for the business community to obtain access to academic science to fulfill their needs. The mission of SCeMFiS is to utilize academic, recreational, and commercial fisheries resources to address urgent scientific problems limiting sustainable fisheries. SCeMFiS is a unique entity because it seeks to simultaneously achieve the goals of sustainable fish and shellfish stocks and sustainable fish and shellfish fisheries. The attainment of these dual goals of sustainable fish stocks and sustainable fishing industries requires a dual focus on (a) the assessment process that determines the status of the stock and (b) the regulatory process that provides the vehicle by which the fishery is managed to optimize stock status while supporting a robust industry. SCeMFiS is unique in being the only federal-industry partnership in fisheries science today that permits the fishing industry to retain a leadership role in designing the science program. This critical attribute assures that the goal of sustainable fisheries will remain a strong component of project design. More information on SCeMFiS is available on its website: http://www.SCeMFiS.org At present the recreational fishing industry is not represented in SCeMFiS because their organizations have not routinely been involved in the assessment process at the level that SCeMFiS intends to participate. Nevertheless, their needs are great â€" witness the disastrous state of the red snapper recreational fishery. This project will permit the recreational fishery to participate in SCeMFiS without the necessity of justifying a large financial commitment to their members, thereby permitting the recreational groups to get involved in the assessment initiatives that SCeMFiS will undertake. It is anticipated that once the value of the center is made clear through their participation, that the recreational groups will continue to participate using funds raised by them from their membership. The project will provide the opportunity for two for-hire groups and two private boat groups to participate for 4 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $100,.000 yearly for 4 years: total $400,000 How will this leverage with other RESTORE priority areas or non-RESTORE funds? NSF will fund SCeMFiS at $175,000 per year. The total SCeMFiS budget this year is about $500,000. SCeMFiS anticipates that this funding level will increase. In addition, SCeMFiS can apply for additional NSF funding to support specific initiatives and for funds to train undergraduates, graduate students, and returning military personnel. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishing industry is one of the most important sources of income for the Gulf coast. In 2012, Mississippi anglers completed 1.6 million angler trips and spent over $120 million dollars on the Gulf coast. Increasing fishing opportunities will increase both jobs and income within the fishing infrastructure of the Gulf, including for-hire vessels, bait shops, hotels. restaurants, etc.	Jackson	Yes	Yes	No	No	Yes	No	No		Yes		$ 400,000.00	$ -	
	Research and Education	1856	6/3/2014	Completion of Shelf and Slope Experimental Taphonomy Initiative (SSETI)	Brief description of activities: SSETI is a long-term experiment designed to evaluate the fate of carbonate on the outer shelf and upper slope of the Gulf of Mexico. These regions include hardgrounds and Lophelia reefs of the type impacted by the BP oil spill. The program is unique in that the experiments have been in place for 20 years, making this the longest running experiment of its kind by more than 15 years. The last retrievals were made in 2006 after 13 years on-bottom time. The program including recovery and analysis can be completed in two years time. SSETI is the single most important dataset monitoring long-term processes of carbonate destruction and preservation over a wide range of shelf and slope habitats. Results have direct implications for understanding the influence of ocean acidification, understanding the processes that result in the creation and maintenance of hardgrounds, and understanding the process of burial and carbonate preservation that provides the single most important sink for atmospheric CO2. Among SSETI sites are the most sensitive deepwater communities in the Gulf: mussel, clam, and tubeworm sites at petroleum seeps and Lophelia reefs. Recovery requires the deployment of a submersible or ROV. These technologies are available. Data analytical methods are well described in a series of papers presenting the status of SSETI after 2, 8, and 13 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000 over 3 years. No long-term funding is required: the project can be completed in 3 years. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The project will influence a range of RESTORE programs targeting the outer shelf and upper slope by providing a long-term dataset that can underpin a range of research programs pertinent to restoration and management of deepwater petroleum-rich, hardground, and soft-bottom habitats. Because of its application in carbonate budget modeling by being the longest running taphonomic experiment in history and the only one with concurrent detailed geochemical data, the project will provide invaluable data for any project dependent upon carbonate production (e.g., oyster reef restoration, estuarine management strategy evaluations â€" see an early section so named), Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will support a number of graduate students at GCRL for a period of three years.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,500,000.00	$ -	
	Research and Education	1857	6/3/2014	Petroleum impacts on long-lived deep-water coral and gorgonian ecosystems: The role of seafloor carbonate in deep habitat formation and resilience	Brief description of activities: With the exception of isolated outcrops of bedrock, coral communities on the continental slope depend upon exposures of authigenic carbonate for settlement. We will investigate the development of authigenic carbonate hardgrounds consistent with the stages in the evolution of the coral hardground community and representative of recent anthropogenic influence. These include (1) the formation of hardgrounds by natural petroleum seepage; (2) the development of habitat islands at the sediment-water interface by examining a gradient from reef affected by spilled petroleum/dispersant (Macando MC-252 in path of plume) to reefs upstream of the plume at MC-252), and to natural petroleum seeps at early stages of development (GC 185) and at waning stages of seepage (GC-234 & Viosks Knoll 826). Objective 1: Persistence and incorporation of petroleum/dispersant within hardground and skeletal carbonate: We will compare the framework of the hardground and the skeletal debris field from petroleum/dispersant affected reefs to those unaffected and to carbonate from natural petroleum seeps with respect to the retention of petroleum and dispersant within the hardgrounds and skeletal material using PAH biomarkers, and trace element analyses. Objective 2: Document the development of carbonate hardgrounds from early formation at methane/hydrocarbon seeps, through stabilization as coral-community habitat, and finally degradation, burial, and loss: We analyze young authigenic carbonates from natural petroleum seeps as well as carbonates from extinct seeps that serve as habitat for coral communities. Data will include age, composition, porosity, location relative to seep activity, trace elements, attached coral framework, encrusting epifauna, and response to petroleum/dispersant. Objective 3: Assess the role of local sediment pore-water geochemistry in promoting or prohibiting the development and maintenance of carbonate at the sediment-water interface: We will examine the geochemical milieu to establish whether the local sediments promote precipitation or dissolution of carbonates a) at natural petroleum seeps, b) after seepage stops (and the time when coral communities thrive), and c) after exposure to petroleum/dispersant. Objective 4: Development of the carbonate substrateâ€"deep reef habitat model: We will adapt our reef carbonate budget model by parameterizing it for the stages of hardground development studied and use this model to a) examine the interplay of carbonate production and loss over a range of present-day and expected future environmental and biological conditions and b) develop from this an improved basis for managing these deepwater habitats. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000 over 3 years. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The project will influence RESTORE programs targeting the shelf and slope by providing an important dataset and modeling capability for one of the most sensitive of the deepwater communities impacted by the BP oil spill. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will support a number of graduate students at GCRL for a period of three years.	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,500,000.00	$ -	
	Research and Education	1858	6/3/2014	Deep-sea crab population dynamics in the Gulf of Mexico: larval dispersal and genetic connectivity between northcentral and eastern Gulf populations of Chaceon	Brief description of activities: Understanding the processes that determine regional biogeography, population connectivity and species recovery following catastrophic events is crucial given the increasing number of anthropogenic activities, including resource extraction, that threaten deep-sea ecosystems. Central to identifying strategic information for management and restoration is knowledge of genetic connectivity, larval transport mechanisms, probable source populations, location of spawning populations, and natural historical changes in population sizes. The large variety of interconnected mechanisms that promote or impede the genetic connectivity of deep-sea species via dispersal (and the long-term maintenance of species or the subsequent divergence of populations leading to speciation) are key unknowns to understanding the fundamental evolutionary processes that structure both the diversity and biogeography of deep-sea fauna. Fortunately, the net results of these ecological interactions are represented in the patterns of genetic connectivity of the constituent species. We are targeting the red crab (Chaceon quinquedens) and the golden crab (Chaceon fenneri) for study as ecological, chemical, and biological data are available for Gulf of Mexico populations prior to the Deepwater Horizon oil spill. Assessment of population recovery in the Gulf of Mexico via population genetic connectivity will provide fundamental new insights into the genetic, taxonomic, ecological, and evolutionary aspects of deep-sea species in the Gulf of Mexico. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None; Ship time included in yearly cost Annual Operation & Maintenance Cost (# years): 3 year project; $1 million/year How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project directly addresses research and education objectives concerned with population genetics and connectivity, eco-system ecology and management, and fishery economics as Chaceon species are harvested in the GOM and along the Atlantic Coast. Partnership with the Woods Hole Oceanographic Institution and with the Florida Marine Research Institute will provide needed expertise and access to existing biological and fishery data, respectively. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The study will provide employment opportunities for individuals with scientific and technical backgrounds.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	

	Research and Education	1859	1/1/1900	Genetic monitoring and repository of genetic resources for important Gulf fish species	Brief description of activities: Efforts to assess the effects of environmental stressors such as the Deepwater Horizon oil spill on populations of exploited fishes are limited by the absence of baseline reference data on affected fisheries stocks. In particular effects of such stressors on genetic diversity and population structure are especially difficult to document because available data for most marine species are insufficient in terms of genomic coverage and temporal and spatial sampling. In this project, selected species of economic importance and differing in their life history and habitat use (coastal/estuarine dependent, reef associated, pelagic) will be surveyed in the Gulf of Mexico and regionally to establish a robust database of genetic resources and temporal and spatial patterns of genetic variation. The database will be developed and maintained over the long term to allow studying comprehensively genetic change induced by environmental stressors on local population if/when they occur. Tissue and DNA databases will be created and genetic characterization will be conducted over a period of 10 years to identify patterns of genetic variation. The data will be made available for assessment of demographic effects on populations exploited by Mississippi fisheries, and to assist in the identification of appropriate genetic resources for stock enhancement and restoration programs when they are needed. For species already cultured for stock enhancement or food production, a repository of genetic resources will be initiated consisting of genetically characterized germplasm. The repository will be made available for aquaculture-based stock enhancement and domestication programs. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,200,000/yr (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project will contribute to the assessment and rebuilding of fisheries stocks and will therefore be synergetic with efforts to restore recreational and commercial fisheries. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The database developed during the project will promote sustainable management of exploited resources. The project will also support aquaculture development both for stock enhancement/restoration and for the food market.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 12,000,000.00	$ -	
	Research and Education	1860	6/3/2014	Implementation of DyPoGEn (Dynamic Population Genetics Engine) to identify significant impacts of resource management options on finfish and shellfish stock connectivity, genetic selection, and genotypic diversity	Brief description of activities: A gene-based population dynamics model, DyPoGEn (Dynamic Population Genetics Engine) has been developed with funding from the NSF Biocomplexity and Ecology of Infectious Diseases programs. This model is configured to simulate the genetic structure and population dynamics of any marine species. The model simulates a population composed of multiple cohorts, each composed of multiple individuals. The age, sex, and genotype of each individual are independently simulated. The genetic structure of each animal is defined in terms of its chromosomal complement, each chromosome bearing a series of genes, each with a series of alleles. This permits the expressed phenotype to be derived from specified genotypes and subsequently to be selected through the normal course of population dynamics. The most recent implementation permits simulations of a series of populations within a metapopulation using larval (and hence gene) transfers based on transfer coefficients derived from a coupled larval-hydrodynamic model. A carbonate-budget model is also coupled to DyPoGEn and responds to the simulated population dynamics ultimately responsive to population genotype. This module is pertinent to species producing carbonate such as oysters and clams. DyPoGEn permits examination of the influence of management measures on population genotype, the development of disease resistance in diseased populations, and the influence of environmental change on population allele frequency and diversity. Of note, amenable to this model are questions related to the influence of fishing on maturity and growth rate of stocks, the influence of disease on oyster populations and carbonate production to sustain habitat, and the influence of freshwater inflow on genetic selection for adaptation to low salinity. This project can be activated to support any genetic analysis or management strategy evaluation where gene-based data are obtained or where issues of genetic bottlenecks or the influence of changes in population connectivity are posed. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $150,000 per year; period is flexible according to need. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The project will influence a range of RESTORE programs targeting the fisheries, ecosystem health, marine diseases, and climate change. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will support a number of graduate students at GCRL for the period of its implementation. Depending on implementation goal, the project will support sustainable management of marine resources (e.g., fish, oysters), the development of management measures to mitigate disease, and optimal management of freshwater inflow to limit freshet mortalities. Each of these has direct economic consequences for the Gulf coast. â€¦	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 150,000.00	$ -	
	Research and Education	1861	6/3/2014	Monitoring the rat lungworm	Brief description of activities: The primary goal of this project is to monitor the invasive rat lungworm (Angiostrongylus cantonensis) in coastal Mississippi. The rat lungworm has a complicated life cycle in which the nematode normally develops in the lungs of rodents, especially the Norway rat. It has a severe human health impact. The larval infective stage occurs in terrestrial or aquatic mollusks, as well as in fishes, crustaceans, and other invertebrates. This species initially introduced by rats escaping from ships in New Orleans in the early 1980s is known to have spread from the Mississippi River levee and killed zoo primates as well as horses farther upriver. Infections can occur in fresh and marine waters as well as terrestrial habitats, in aquaculture ponds and in imported ornamental fishes and seafood products. In humans, the worm infects the brain rather than the lungs and causes neurological pathology and occasionally death. The nematode is probably present in coastal Mississippi, and its spread could be further exacerbated by sea level rise. We have already discussed the invasion of the parasite with Centers for Disease Control specialists in infectious disease in Atlanta and will validate and use their molecular tools presently being developed. The project will analyze, using quantitative polymerase chain reaction (qPCR), snails from the three Mississippi coastal counties. The snails will be collected seasonally, especially focusing near areas with the presence of cargo and other ships plus the Norway rat. Where infections are found, fishes and shrimps that may have been in contact with the hosts will be examined for the larvae infective to humans. We can then use these data to see if specific habitats are more susceptible to invasion and determine if remote sensing (offered to us by MSU) can detect these areas. The purpose of this project is not to frighten people from eating undercooked seafood products or handling mollusks but to determine the presence and intensity of infection so that public risk can be determined, evaluated, and followed. Continuing results will be made available to interested parties such as CDC, NOAA, USFWS, MDEQ, MDMR, and Public Health agencies. An attempt will be made to determine how to reduce or eliminate local infections and to inhibit the spread of infective agents into the Mississippi area. Location (City, County): GCRL; field sites in Jackson, Harrison and Hancock Counties Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $230,000 per year for 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project would interact well with funds including RESTORE 1603(b), RESTORE 1603(c), NFWF natural resource and environmental restoration projects, BP Early Restoration, and NRDA Restoration. This project will address the key RESTORE priority areas of eco-restoration and mitigation of insults caused by the invasive pathogen. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will require hiring people capable of collecting potential hosts, helping conduct molecular analyses, and analyzing public health risk. If infections are common, we will train public health officials regarding infections and results from our monitoring.	Harrison, Jackson, Hancock	Yes	Yes	No	No	No	Yes	No		No		$ 1,150,000.00	$ -	
	Research and Education	1862	6/3/2014	Monitoring Dermo in Mississippi oysters	Brief description of activities: We will seasonally monitor oysters in Mississippi for "Dermo." Although both Jackson and Hancock Counties in Mississippi have oyster reefs that have been commercially harvested, those in Jackson County have been very productive. We hypothesize that fatal infections by the protist parasite Perkinsus marinus (commonly referred to as â€œDermoâ€) in young oyster spat play a pivotal role in this lack of success, as part of a complex interplay of salinity, temperature, nutrients, predators, symbionts, and other stressors. We will test for this problem as well as provide data for ongoing oyster management by monitoring for the agent and conducting additional research. Dermo is an infectious agent in the common commercial eastern oyster (Crassostrea virginica) in Mississippi that is known to kill or lessen the quality of the oyster product, but its role in early stages of oyster development is relatively little known. We propose to collect oysters seasonally with cooperation of DMR and evaluate the prevalence and intensity of Dermo infection in young spat, juvenile, and adult specimens from different Jackson County locations and compare them with infections in monitored Hancock County reefs. We will use quantitative polymerase chain reaction (qPCR) that detects precise levels of the pathogen, even at initial stages of infection. We will complement the field monitoring with laboratory and field experiments with laboratory-reared spat and wild oysters. We have over 40 years experience working with oyster diseases and symbionts, including conducting Dermo culture assays for DMR and other agencies. In addition to publishing our results, we will incorporate monitoring results in Oyster Sentinel (www.oystersentinel.org), a Website treating Dermo in the eastern oyster as an indicator of environmental health in the Gulf of Mexico from Texas to Florida. Results from this study will aid Eco-Restoration management for oyster reef recovery, will inform decision-making agencies involved in reef management as well as replenishing failed reefs by relaying oysters from other reefs, recommending addition of freshwater input, and other strategies. Location (City, County): GCRL with field sites in Jackson and Hancock County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $225,000/year for 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? Successful Eco-Restoration of living coastal and marine resources requires research to understand and monitor the health of its major species; for seafood resources, this is particularly important. This project would fit objectives included in RESTORE 1603(b), RESTORE 1603(c), NFWF natural resource and environmental restoration projects, BP Early Restoration and NRDA Restoration. This project will address the key RESTORE priority areas of restoration and mitigation of seafood impacts caused by stressors including pathogens. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): In addition to providing information for management agencies, which will require training that we will provide, we will hire additional employees and students for field and laboratory work.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,125,000.00	$ -	
	Research and Education	1863	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Living Shoreline Protection and Marsh Restoration	Hardening the Bay of Saint Louis with oyster and clams; reintroducing sea grasses along the shoreline compatible with tidal hydrology and salinity; monitoring both conservation and recovery are components of this project. By hardening the Bay of Saint Louis with oyster and clams, water quality will be improved. Erosion as seen on slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. In conclusion, the project restores the shoreline, restores water quality and enables monitoring for both conservation and restoration progress.	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ 740,500.00	$ -	
	Research and Education	1864	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Water Quality Restoration Enchancement Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring both conservation and recovery are the components of this project. Stream restoration will enhance the quality of water in adjacent waterways in addition to detention ponds and overflow discharge outfalls located within the City. In conclusion, the project restores streams and drainage discharge areas to its original state with the addition of sediment traps which makes beneficial use of runoff.	Hancock	Yes	Yes	No	Yes	Yes	Yes	No		Yes		$ 1,688,000.00	$ -	
	Research and Education	1865	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Bird Estuary and Nature Trail	By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plants and ultimately water quality. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	80	Yes		$ 5,720,500.00	$ -	
	Research and Education	1866	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Marine Education and Recreation Restoration	This project consist of a marine education center, a 9 mile kayak route and a 1 mile hiking and biking trail that will provide marine education and restore nature recreation. Identifies cypress, tupelo gum, fresh water, brackish water, saline marsh, environment through education, information and monitoring stations at strategic locations along the 9 mile route. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	40	Yes		$ 1,370,500.00	$ -	

	Research and Education	1867	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring conservation and recovery are the components of this project a byproduct that makes beneficial use of trapped sediment also allows public access. By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plans and ultimately water quality. By hardening the Bay of Saint Louis with oyster and clams water quality is improved, sea grasses will be reintroduced and erosion as seen in slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. This project consist of multiple activities that stimulate public interest and support as well as education and participation in recreation restoration, seafood production and water quality. In conclusion, the project restores streams and drainage to its original state with the addition of sediment traps which makes beneficial use of urbanized run off. The project also has build in monitoring stations that benefit growth and the City supports and embraces this project..	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	80	Yes		$ 9,519,500.00	$ -	
	Research and Education	1870	6/11/2014	Billboards informing of invasives	Most people don't read. They think that lovely strange tree that turns such beautiful colors in the fall is some blessing they have received. Billboards with pictures of tallow trees and cogon grass would FORCE those who don't read to reccognize the invasives.	Harrison, Jackson, Hancock	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -	
	Research and Education	1874	6/21/2014	COASTAL WATER GUARDIANS (an Education, Intern & Apprenticeship project)	This project involves education, research and internship opportunities for coastal high school, college and university scholars. For those enrolled in marine education programs, this would incorporate "hands on" opportunities. During the planning process, meetings will be held with coastal high schools and institutions of higher learning along the coast to determine how to incorporate the project in curriculum and to gain project approval from state and local educational authorities. The proposal includes Harrison, Hancock and Jackson counties. The project provides workforce development opportunities for low-income participants through apprenticeships. Stipends will be provided to learn the skills necessary to play an active role in the restoration and healthy sustainability of natural habitat and coastal waters. Many coastal residents still desire maritime occupations. Unfortunately, for the past several decades, such opportunities have become rare. This program would re-ignite such prospects and create opportunities to learn skills that could enhance employment opportunities, spur economic development, and sustain families along the coast. We should, and must provide an EQUAL OPPORTUNITY restoration, one that ensures ALL RESIDENTS a chance to benefit from the experience and knowledge gained through the recovery and restoration process. If restoration is to be preserved and maintained far into the future,it is imperative that our youth and young adults be educated and prepared to assume this task. Participation can begin as early as the 9th grade for students enrolled in Marine Biology or similar classes. Students enrolled in colleges or universities with Marine Biology classes and/or majors would also be eligible. Youth and young adults are the future stewards and keepers of our land, waters and other natural resources. Summer internships will include stipends to reward student success and provide economic relief. The component will also ease the school to work transition. Upon project approval, Visions of Hope would like to commence formal planning as soon as possible and arrange meetings to initiate the partnership agreement process. The organization"s overall role in this project would include, but is not limited to: COORDINATOR - arrange/coordinate meetings necessary for planning, implementation and monitoring; secure partnership agreements with the various educational and other entities; gather/maintain/disseminate statistical data OUTREACH - disseminate information regarding the project; aid in securing program participants EDUCATION - GED/ABE classes, money management classes The cost quoted below is an annual estimated projection related to Visions of Hope's planning role and basic workforce development skills only. ($250,000). This amount could change depending on meeting requirements and related costs such as transportation,lodging, food, etc. Internship/ apprenticeship costs are also not included.	Harrison, Jackson, Hancock	Yes	No	No	No	Yes	Yes	No		Yes		$ 250,000.00	$ -	
	Research and Education	1875	6/24/2014	High Resolution aerial survey of marine wildlife and marine bird abundance	Population abundance estimates have traditionally been difficult to calculate for migratory and transitory species in the Gulf. Advancements in high resolution video capture, storage and review have made this technology accessible and affordable for wildlife studies, and this project would implement aerial survey methodology approved by BOEM to produce population estimates for sea turtles, marine mammals and pelagic birds in the Gulf. High resolution video is captured by high-flying aircraft, the video is run through a computer algorithm that filters out ships, waves, etc and flags wildlife for human reviewers to identify producing a safer, less expensive, more accurate and reliable assessment when compared to other methodologies. $800,000 Gulf-wide - cost should be shared between states or with federal partners	Jackson	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -	
	Research and Education	1876	8/1/2014	The Economic Impact of Alternative Numeric Nutrient Criteria on Mississippi Communities	*Project Partner - Mississippi Farm Bureau Federation* Research Goal The overall goal of this research is to better understand how Alternative Numeric Nutrient Criteria (NNC) can impact Mississippi (MS) communities. We include agriculture, urban storm water, septic, municipal wastewater, industrial and state resource agencies as the affected sectors in these communities. For each sector, the cost of adapting to a newly proposed NNC will be estimated. For example, we propose to estimate the cost of such standards upon the agricultural sector including, but not limited to, row crops, specialty crops, poultry, and cattle. Total costs will then be aggregated across sectors and a regional and state level economic impact analyses will follow. The NNC to be examined in this study have been proposed by the MS Department of Environmental Quality (MDEQ) under the Environmental Protection Agency (EPA) directives. Where possible, we primarily follow the methodology for estimating costs per sector under uncertainty as described by the Florida Water Quality Coalitionâ€™s 2010 study. Research Study Area The State of Mississippi (48,434 mi2) has nine major river basins with approximately 86,000 miles of streams draining directly into the Mississippi Sound and the Gulf of Mexico, the Mississippi River and the Tombigbee River (Figure 1).The basins of the Pearl and Pascagoula Rivers and the Coastal Streams represent 41% of the Stateâ€™s area and empty directly into the Gulf of Mexico off the coast of Mississippi (Figure 1). Livestock production is the most important agricultural activity in these areas. Nutrient and bacteria from animal wastes often get into the streams resulting in different water quality problems along the inland water bodies and the coastal waters. This entire area has been ranked nationwide in the top ten and top twenty areas in need of protecting water quality from manure nutrient contaminants (Kellogg. 2000). Mississippi State University Research Team James Barnes (PI) Assistant Extension Professor, Dept. of Agricultural Economics, Mississippi State University Matthew G. Interis (Co-PI) Assistant Professor, Dept. of Agricultural Economics, Mississippi State University	All MS Counties	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 739,478.00	$ -	
	Research and Education	2031	11/9/2011	Expanded Real-Time Hydrological Monitoring Program	This project consists of expanding the number of hydrological monitoring stations in the Mississippi Sound utilizing current real-time technology. These stations are used as a marine management tool to aid in fishery resource monitoring and recovery from both natural (hurricanes) and man-made (oil spill) disasters. Currently the Mississippi Department of Marine Resources (MDMR), cooperatively with U. S. Geological Survey (USGS), operates eight real-time data monitoring stations in the Mississippi Sound. A more comprehensive mosaic of stations is needed to fully monitor conditions that affect marine resource populations and their movements in Mississippi waters. Current parameters of water temperature, stage, conductivity/salinity and anticipated additions of turbidity, dissolved oxygen, pH, etc. would be transmitted continually; the data would be available on the MDMR website. Marine resources managers, fishermen, and the general public would have more instant information with which to make fishery decisions. Historical data would be used to correlate studies with fishery occurrences and environmental phenomenon.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No	Yes	$ 400,000.00	$ -	
	Research and Education	2064	11/9/2011	Restoration Initiatives at the INFINITY Science Center	The INFINITY Science Center provides a unique opportunity to monitor the impacts of the oil spill and educate the public about coastal wetlands and the state of recovery. INFINITY is a state-of-the-art, interactive science and interpretive center under construction in Hancock County and is a gateway to 1,400 acres of upland and wetland habitats. Through hands-on activities in the Earth gallery, as well as in the field, visitors will learn about wetland plants and participate in restoring vegetation in the nearby Pearl River watershed. Nature trails to the East Pearl River, which flows into the Mississippi Sound/Gulf of Mexico, will connect with 43 miles of scenic byways in Hancock County. The INFINITY trails will provide opportunities to monitor the impact of the spill on local wetlands, native wetland bird species and wetland-dependent migratory species.	Hancock	Yes	No	No	Yes	No	Yes	No		No	Yes	$ 10,000,000.00	$ -	
	Research and Education	2066	10/24/2011	Long-Term Recovery of Gulf Shorebirds and Waterbirds	NOAA Project ID# 11413: This collaborative proposal supports three strategies that contribute to the full recovery of shorebird and coastal waterbird populations impacted by the oil spill, while ensuring such gains are sustained over the long-term. Specifically, the work proposed will: 1) Create and maintain nearly 28,000 acres of seasonal freshwater wetland habitat that completely address the habitat conservation 'gaps' for five important shorebird species, as well as provide demonstrable benefits to an additional 41 species of shorebirds, waterbirds, and waterfowl affected by the oil spill. 2) Increase the regional breeding populations of 37 species of beach and island nesting waterbirds and shorebirds that were directly impacted by the oil spill by 10,000-16,000 birds by improved management of critical nesting and stopover habitat along the Gulf and Atlantic coasts. 3) Ensure bird population gains are sustained through long-term stewardship of their key habitats, thereby avoiding a common shortcoming of conservation actions - that is, diminishing returns over time because of lack of resources to maintain those initial gains. The plan proposed below will ensure the long-term recovery and health of Gulf Coast shorebird and other waterbird populations affected by the Deepwater Horizon oil spill. These strategies are meant to complement, not duplicate, other activities (e.g., coastal marsh and barrier island restoration) that are likely to be undertaken by others and funded through the NRDA process. Key partners include the National Audubon Society, U.S. Fish & Wildlife Service, Ducks Unlimited, American Bird Conservancy, Manomet, Coastal Bird Conservation/Conservian, and Gulf Coast Bird Observatory. In 2010 and 2011, NFWF directed more than $13 million in the Gulf region towards conservation of birds that were likely to be negatively affected by the oil spill. Those innovative investments, developed and implemented collaboratively with federal, state, and private partners, resulted in unprecedented gains in habitat enhancement, restoration, and protection; direct augmentation of affected bird populations; and increased capacity for regional recovery of imperiled species. This proposal builds directly upon those initial investments.	Gulf of Mexico	Yes	No	No	No	No	Yes	No		No	Yes	$ 71,900,000.00	$ -	
	Research and Education	2067	10/21/2011	Addressing Marine Debris to Expedite Recovery along the Gulf Coast	The significant and long-term negative impacts along the Gulf Coast resulting from the Deepwater Horizon oil spill will require a suite of restoration projects. In addition to physical marsh restoration and other activities to restore resources, the entire Gulf region will significantly benefit from a targeted, sustained outreach and education campaign to improve the health of impacted resources. This type of restoration project, conducted as part of NRDA in the past, will reduce future injury to protected species - both marine mammals and sea turtles - and their habitats through the reduction of existing marine debris as well as the prevention of future introduction of hazards. By preventing preventable future injuries, this project will enhance the capacity for species and habitat recovery and the time of impact to recovery will be shortened. Enhancing nearshore and shoreline habitats through reducing impacts of marine debris will aid in the long-term, sustainable recovery of the Gulf Coast at an accelerated rate. Specifically, this project will effectively coordinate and execute a two-year, intense outreach and education campaign that will result in lasting changes after the project is complete. Hosted at the NOAA Disaster Response Center in Mobile, AL, and coordinated as a NOAA partnership project with the NOAA Marine Debris Program as lead coordinator, this project will engage all five states, maintain and improve partnerships with state and local organizations, and strengthen public engagement across the Gulf. This project t is specifically targeted to involve and educate Gulf Coast communities how marine mammals, sea turtles, and habitat will all directly benefit from debris prevention and removal. The project will also look to identify targeted areas for debris removal that will have the most impact to improve the ecological health of the Gulf. Key contacts associated with this project already have strong professional working relationships across th e region. As has been successfully demonstrated in previous projects in the Gulf of Mexico, Sea Grant extension agents have a unique capacity to strengthen community involvement - including select communities where English is not the first language - and broaden awareness through effective beach clean-ups, fish rodeos, etc. This project will incorporate powerful Public Service Announcements, print materials, and technology to effectively raise the awareness across the Gulf States that a sustained outreach campaign focused on debris prevention and removal will benefit livelihoods in the entire region in both the short and long-term.	Gulf of Mexico	Yes	No	No	No	No	Yes	No		No	Yes	$ 10,000,000.00	$ -	
	Research and Education	2073	7/8/2014	Small and Medium Business Entrepreneurship Training	Gulf Coast Business Partners will conduct 12 weeks of basic business training to small business along the MS Gulf Coast. The training will equip the small business person with the basic needs to sustain and grow their business. In addition to training participants will be matched will be matched with mentors. Gulf Coast Business Partners believes that strong partnership will encourage four strategic activities.. Training, Mentoring, Advocacy and Access to Capital...in order to walk alongside small and medium enterprise owners. Overemphasizing one activity or neglecting another makes for an unbalanced approach to sustaining and growth of business development.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No	No		Yes		$ -	$ -	

	Research and Education	2074	7/14/2014	Oyster Reef Structural Complexity	Summary attached.	Hancock, Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 438,035.00	$ -	
	Research and Education	2075	7/18/2014	MS Observing and Modeling Restoration Network (MSOMRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Hancock, Harrison, Jackson, St. Tammany, Mobile	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 47,000,000.00	$ -	
	Research and Education	2076	7/23/2014	MS Living Marine Resources Restoration Network (MSLMRRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Mobile, Hancock, St. Tammany, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 49,000,000.00	$ -	
	Research and Education	2085	7/30/2014	MS Habitat Characterization Restoration Network (MSHCRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Harrison, Jackson, Hancock, Mobile, St. Tammany	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 19,000,000.00	$ -	
	Research and Education	2086	7/30/2014	MS Indicators of Stress Restoration Network (MSISRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are: 1. Physical, Chemical and Geological Drivers of Environmental Variations, 2. Modeling and Forecasting, 3. Living Marine Resources and Ecosystem Components, 4. Indicators of Stress, 5. Habitat Characterization, 6. Measurement Archival and Data Management,	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 7,000,000.00	$ -	
	Research and Education	2099	8/20/2014	Remove debris in Turkey Creek from Hwy 49 West to MPC Power Line Right- of- way	In additional to debris removal from Turkey Creek, also provide an elevated access and an out door classroom for for North Gulfport 7 & 8 Grade Middle Schools and Isiah Frederick Head Start School students to study insects, collect water samples and study different species of birds and animals. Introduce Head Start students at an early stage in learning how to become better environmental stewards. Create an access point for the middle school students to safely perform these educational opportunities.	Harrison	Yes	No	No	Yes	No	No	Yes	40	No		$ 225,000.00	$ -	

	Research and Education	2103	4/1/2015	Erosion Control and Sediment Management in the Coastal Zone	This project would propose to implement several types of sediment control strategies in the Coastal Zone. Surface runoff caused by heavy rains carries sediment, nutrients and chemicals to our streams, rivers and eventually to the Gulf of Mexico. Erosion takes place in all locations without sufficient vegetative cover. Those locations include house sites, industrial sites, timberlands, crop and pasture lands, road sides, stream banks and other waterway locations, recreational sites and abandoned properties such as houses, closed industrial sites, farms, and surface mines. Each site will require a different prescription to solve the erosion problem. Site locations will need to be identified and solutions recommended by trained professionals to assess the severity of the problem and to define the best, most economical solution for each site. There are several conservation practices that can be used to reduce erosion and slow down surface run off. These include the use of cover crops, vegetated field borders , grassed waterways, permeable paving, no-till crop rotations, managing crop residue, tree planting, stream bank stabilization, and the creation and renovation of water impoundments to trap sediment prior to entering our streams and rivers. Some of these water impoundments could also be used for fire protection. Many landowners can reduce or eliminate much of the erosion simply by changing the management practices used or implementing new ones. This will require identification and often education for the landowners to understand why the erosion is taking place, what practices are available to implement and how important erosion control can be for the immediate improvement in water quality for all species downstream as well as for the communityâ€™s long-term water quality. Some sites will experience unusual amounts of erosion during emergency storm events such as heavy rains, flooding and hurricanes. Often these are areas that repeatedly have erosion issues during heavy water flow. Determining a long-term solution for the problem will be the overall goal, but having readily available funding for immediate repairs after these emergency events will greatly enhance the ability for landowners and business owners to diligently make a difference in the overall reduction in erosion and improvement in the water quality of their watersheds. Many emergencies cannot be predicted, but they will happen and the faster a community can respond, the less damage will result from those events.	Harrison, Hancock, Jackson	Yes	No	No	No	No	Yes	No		No		$ 9,000,000.00	$ -	
	Research and Education	2104	4/1/2015	Conservation Demonstration Working Farm	Thanks to numerous conservation innovation practices, as stewards of the land we are doing a much better job than in the past. As urban sprawl and demands for our natural resources continues to increase, we need a forum to demonstrate these new conservation advances to the public. A working demonstration farm would not only benefit consumers of natural resources but also the producers of those resources and others. â€œThe Farmâ€would be utilized in multiple ways to exhibit conservation practices. Farmers would be shown cutting edge farming practices that would benefit the environment while at the same time benefitting their bottom line. Students will take advantage of the facility to better understand the native habitats and the methods that are being used to handle the growing use of them today. Schools will be able to expose children to where the food and fiber that they consume daily comes from and what it takes to get those products to them. Researchers will continue to explore new mechanisms that will aid in conservation. State and County officials can use the site to better understand the pleas of those who they serve. These are just a few of the services that â€œThe Farmâ€ could be of use to the public in its understanding of conservation. The CMSWCP would like the opportunity to establish a â€œConservation Demonstration Farmâ€ The land would be acquired and the necessary infrastructure established. The locations would ideally consist of varied topography within a watershed basin close to a major waterways.	Harrison, Hancock, Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ 5,000,000.00	$ -	
	Research and Education	2107	8/29/2014	Invasive Plant Species Control	Both terrestrial and aquatic invasive plants are causing devastating effects to the native Gulf Coast ecosystems, agriculture industry and public entities. Recent hurricanes spread many of these plants in the region. Grass farmers, timber growers, livestock producers, horticulturalists and many others in the industry are becoming overwhelmed with these invasives. The high cost of treatment and the aggressive establishment of many of these species is causing great concern to our agriculture industry. Native ecosystems are becoming greatly affected by these invasive plants as well, reducing biodiversity and decreasing native food for wildlife. The thick rhizhomes of cogongrass make it difficult for tortoises and other animals to burrow. Cogongrass is highly combustible and burns at a much hotter temperature than native undergrowth, sometimes killing mature timber and creating a dangerous situation around structures. Aquatic invasives like salvinia, hydrilla and water hyacinth choke waterways and block sunlight. Japanese climbing fern can pull down saplings and Chinese tallow tree and privet hedge quickly colonize open areas. Public entities spend much money and staff time battling these plats. The Soil and Water conservation Districts in the lower six counties propose an outreach and education plan for these invasive pest plants. In addition, we would develop a treatment program and task force consisting of State, Local and Federal Agencies, private businesses and organizations to deal with the encroachment of these species in the lower six counties of Mississippi.	Harrison, Hancock, Jackson	Yes	No	No	No	No	Yes	No		No		$ 9,000,000.00	$ -	
	Research and Education	2117	9/18/2014	Park Restoration and Expansion Initiative	Currently Pat Harrison Waterway district owns and operates eight parks. These parks provide camping, cabins, and recreational facilities for both locals and tourist to enjoy. As part of the Pascagoula River Basin Enhancement Program a renewed focus will be taken on maintenance and restoration of these parks to enhance recreational opportunities for the community. The goal of the park restoration and expansion initiative is to reach out to the local communities and civic groups to identify restoration needs of the parks as well as looking into the expansion of existing facilities based on attendance and local interest. By providing new pavilions, boat ramps, updating cabins, adding watercraft rental outposts, educational trails and interpretive stations, the existing parks can be improved to increase tourism and improve quality of life for the community. As part of the park restoration and expansion initiative, community outreach is imperative. Allowing the community to identify needs and concerns ensures the intended recipients of these improvements are satisfied. Event programming and outreach to increase tourism will be initiated in parallel with restoration efforts as well as updating the multi-media facilitation of park information.	Stone, Jackson, Pearl River, Perry, Harrison, George	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2118	9/22/2014	Pascagoula River Basin Enhancement Program-Pascagoula River Water Trail	The Pascagoula River Basin Enhancement Program has the opportunity to capitalize on the vast ecological treasures that the Pascagoula River Provides. The Pascagoula River Water Trail Project establishes the national designation of this water system in the National Water Trails System. This identification serves to bring existing and newly identified water trails together into one cohesive national network of water trails. The objective of the National Water Trail System is established as protecting and restoring Americaâ€™s Rivers, shorelines, and waterways and conserve natural areas along waterways. Also serves to increase access to outdoor recreation on shorelines and waterways. Using the established major tributaries to the Pascagoula, the Pascagoula Water Trail seeks to unite the Pat Harrison Waterway District with a cohesive goal of recreational access and restoration of the riverine systems. The first phase would establish the Leaf, Chickasawhay, and Pascagoula Rivers as water trails. The second phase would expand to include other tributaries in areas that community outreach and support is strong. A key objective of the water trail is to develop trail-heads at strategic locations along the trail. These trail-heads will be existing park facilities that are adjacent to the water trail like Dunnâ€™s Falls and new facilities that will include water-sports outposts and convenience stores. Part of the development of the water trail will be the establishment of safe watercraft launches, campgrounds, walking trails, fishing outposts, and educational boardwalks. There is an opportunity to develop a cultural heritage museum at one of the trail-heads that would increase the tourism traffic to the trail. Additional infrastructure to connect the new facilities to existing roadways will be built as well as improvements to existing infrastructure. The goal of the water trail is to increase the quality of life in adjacent communities, increase the ecotourism appeal of the region, improve existing facilities, extend recreational opportunities, and highlight the historical significance of this unimpeded water system. Each water trail while designated nationally is locally managed. With community support the Pat Harrison Waterway District, Pascagoula Water Trail will provide recreational opportunities, educate the public about the value of water resources and cultural heritage, provide opportunity for conservation of waterway health, provide the public with accessible and understandable water trial information, maintain the routine and long term investments on the water trail, and plan for the future vision of the Pascagoula River Basin.	George, Perry, Forrest, Jackson, Stone	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2119	9/22/2014	Pascagoula River Basin Enhancement Program- Pascagoula River Basin Forest Preserves Program	Of the counties within the Pat Harrison Waterway district, an average of seventy-nine percent of the ground coverage is forestland. In order to preserve and maintain both pine and hardwood in the region, the Pascagoula River Basin Forest Preserves Program will restore pine and hardwood and provide technical and on-the-ground restoration assistance to family forest landowners interested in managing or restoring the pine and hardwood on their lands. The program will identify, protect, and manage forest habitat, recognizing that the abundance and productivity of the Pascagoula River Basin ecosystem is a product of the quantity and quality of the forest habitat. The south and central parts of Mississippi continue to face threats from the southern pin beetle on the forestry industry. As part of this program the movement and outbreaks of destructive species like the southern pine beetle will be monitored and evaluated for conservation initiatives. The goal of the Pascagoula River Basin Forest Preserves Program is the integrate landowner outreach with prescribed conservation to monitor, maintain, and restore the forest within the Pat Harrison Waterway District.	Stone, Jackson, Forrest, Perry, Harrison, George	Yes	No	No	No	No	Yes	No		Yes		$ -	$ -	
	Research and Education	2120	9/22/2014	Pascagoula River Basin Enhancement Program- Pascagoula River Riparian Buffer Maintenance Plan	This program will seek to identify, monitor, and maintain riparian buffers along the Pascagoula River and its tributaries. Also provide outreach and technical assistance to accelerate firs-time enrollment of new riparian buffer though the conservation reserve enhancement program. Riparian buffers act to partially protect streams from the impact of adjacent land uses. Buffers increase water quality in associated streams as sediment is intercepted, serve to provide habitat, and reduce bank erosion by providing bank stabilization. The Pascagoula River Basin drains much of Southeast Mississippi into Pascagoula Bay. This management program is being undertaken to ensure that past and future development does not diminish the quality of water entering Pascagoula Bay from the upstream river basin. This river basin faces excessive erosion and sedimentation, storm-water runoff from new development can impact the riverine morphology. With planning and monitoring riparian buffers will help control channel instability, head-cutting, mass slumping, and wetland degradation. Riparian buffers that exist currently and proper planning of new buffers will help mitigate future loss in water quality.	Stone, Jackson, Forrest, Perry, George	Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	2121	9/22/2014	Pascagoula River Basin Enhancement Program- Pascagoula River Species Stewardship Program	This program will seek to establish a monitoring and planning program that will increase and maintain the habitat of species native to the Pascagoula River and its tributaries through stewardship activities. The stewardship program will focus on carrying out standard monitoring activities; implement best management practices to secure sensitive habitats and reduce human use and invasive species threats; and educate diverse audiences to increase understanding of the needs and value of the Pascagoula ecosystem. Several species native to the Pascagoula River Basin include the Gulf sturgeon and the striped bass that migrate to the river to spawn. Also found in this watershed are the Pearl darter, swallow-tailed kite, Mississippi sandhill crane, and the yellow-blotched map turtle. All of these and any other identified threatened and endangered species will be included in this stewardship program. The goal of the Pascagoula River Species Stewardship Program is to restore and protect Pascagoula River species populations, reduce identified stressors and disturbances, and restore habitat to allow higher rates of survival.	Stone, Jackson, Forret, Perry, George	Yes	No	No	Yes	No	Yes	No		Yes		$ -	$ -	

	Research and Education	2122	9/23/2014	Pascagoula River Basin Enhancement Program- Stormwater Management Initiative	Stormwater Management Initiative: Pollution and Prevention Plan This plan is intended to develop a management programs for current stormwater rehabilitation and future construction within the Pat Harrison Waterway District. The Pascagoula River and its tributaries feed a watershed that covers most of southeast Mississippi. The groundwater and surface water that feeds the riverine systems flow into Pascagoula Bay and ultimately the Gulf of Mexico. In order to best conserve and maintain the health of those who depend on this riverine system, proper stormwater and run-off monitoring is vital. The Stormwater Management Initiative will focus on the streams and urban areas that flow directly into the Pascagoula and its tributaries. The program will seek to restore streams that are highly altered including green corridors enhancing their ability to handle stormwater runoff, erosion, and sedimentation. Also, runoff will be monitored for water quality to ensure proper best practice management and construction practices are being implemented. The goal of the Stormwater Management Initiative is to directly engage local communities to the importance of best management practices as well as promote proper construction and design of future stormwater systems. There are several approaches to stormwater management to consider. Low-impact development seeks to manage runoff using a distributed approach that mimics the predevelopment hydrology instead of conveying and treating stormwater at only the end of the drainage area. Green infrastructure is an approach that uses a natural system to capture, cleanse and reduce stormwater runoff using plants, soils and microbes. And environmental site design is an approach that mimics natural systems along the whole stormwater flow path through combined applications of design principles. The objective for the environmental site design is to replicate forest or natural hydrology and water quality. With proper incentives and partnerships pre-planning for future stormwater infrastructure can help properly conserve and maintain riverine systems. The Stormwater Management Initiative will focus on non-point sources of water pollution and prepare a monitoring program that coincides with the best management practices to be developed and adopted by communities that will identify areas of water quality concern. The identified locations will be the focus of the monitoring initiative and evaluated for improvement options where applicable. With a combination of community outreach and proper planning the Stormwater Management Initiative will seek to educate those on the importance of the ecological value of the Pascagoula River Basin and encourage future responsible stormwater management techniques.	George, Perry, Forrest, Jackson, Stone	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2123	9/23/2014	Pascagoula River Basin Enhancement Program- Waterfront Development Program	Pascagoula River Basin Waterfront Development Program This plan is intended to develop a management program for future waterfront development within the Pat Harrison Waterway District. A waterfront can be the most desirable location for future development. Proper planning and adopted management programs for waterfront areas are fundamental when the need to arises to ensure environmental sensitivity in an ecologically diverse region. The Pascagoula River Waterfront Development Program will establish a best practices and development method that will ensure the desired waterfront economic and job creation are responsibly achieved in a way that mitigates environmental impact. Waterfront properties and recreational development can enhance the quality of life for communities. Greenways and riverwalks become tourist host spots and can enliven a cityâ€™s economy. The Pascagoula River Basin Waterfront Development Program will maintain environmental focus while properly monitoring future development along the riverine system. The development of educational boardwalks, farmers markets, and greenways all a part of waterfront development programs will promote tourism, economic development, and expand recreational options.	Stone, Jackson, Forrest, Perry, George	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2124	9/23/2014	Pascagoula River Basin Enhancement Program- Digital Watershed Management Model Approach	The Pascagoula River Basin is Mississippiâ€™s second largest river basin and is also the last unimpeded river system in the contiguous United State. It is approximately 164 miles long, 84 miles wide, and includes more than 15,000 miles of rivers and streams. Major rivers within the Basin include the Pascagoula, Chickasawhay, and Leaf Rivers as well as Black Creek and Red Creek. The Basin eventually drains into the Mississippi Sound/Gulf of Mexico at Pascagoula, Mississippi. The Basinâ€™s ecosystem is nationally recognized for its abundant wildlife, biological diversity, and rich cultural and historical heritage. It is an undisputed national treasure. As a prime tributary to the northern Gulf of Mexico, the water quality and biological health of the Pascagoula Basin contributes directly to the health, well-being, and quality of the Gulf. Following the BP Oil Spill and the subsequent impacts to Gulf waters, biota, and fauna; numerous initiatives have been proposed (and some initiated) to improve the ecosystem of the Gulf, specifically its inland water bodies and habitats. To this end, the Pat Harrison Water Management District envisions an initiative leading to quantification of the water quality and attributes of the Pascagoula River Basin, over which Pat Harrison exercises statutory oversight. This initiative addresses a need for developing a comprehensive, total watershed approach to water resources management throughout the Pascagoula Basin, including the major contributors the Pascagoula, Leaf, and Chickasawhay Rivers, also any minor contributing streams and creeks. The approach would facilitate collaborative relationships with other parties (local, state, and federal, as well as non-governmental organizations) with shared interests in the use, quality, and management of the waters of the Pascagoula Basin. The primary tool at the core of such a total watershed approach is a comprehensive, digital land base model of the Basin. This model will consist of a digital framework of data layers, the chief of which are ortho-imagery, topography, and hydrography â€“ all at very high resolution. These enable the most advanced modeling and assessment possible. Essentially, this tool would serve as the foundation for all future studies and assessments of the Basin related to water quality, ecosystem and environmental health, infrastructure and economic development, or otherwise. The specific area proposed for development of the initial model is the combined watersheds of the Chickasawhay and Leaf Rivers, continuing to their confluence forming the Pascagoula River in George County. Overall, this combined watershed comprises nearly 9,000 square miles. The goal of the digital watershed management model is to provide a tool that can be utilized by both public and private end users to serve a host of functions that ultimately promote the mutual interests and benefits of the Pascagoula Basin and Northern Gulf of Mexico. Specifically, the model will facilitate evaluating and establishing policy guidance regarding such issues as: -Ownership and allocation of water along water courses with multiple contiguous property owners, including addressing Riparian doctrine; -Resource management and enhancement; -Preservation of the balance of instream flows and nutrient levels along critical stream reaches, including issues related to Total Maximum Daily Loads; and -Regulation of interbasin transfers. Further, the watershed management model would facilitate these stated objectives, and others, by providing the digital database that would serve ongoing â€“ -Comprehensive, science-based, data collection and assessment at all levels of federal, state, and local government; and -Comprehensive inventory of water resources, including uses, quality, quantity, and availability. The digital Pascagoula Basin Watershed Management Model will consist of framework â€˜layersâ€™ of digital data representing the surface of the earth and selected features, in a seamless, geospatially-referenced format. The model includes data developed and managed according to â€˜layersâ€™ of common information, the most important of which are high-resolution, digital	Stone, Jackson, Pearl River, Forrest, Perry, George	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2126	9/23/2014	Pascagoula River Basin Enhancement Program- Dam Safety Best Management Initiative	Pascagoula River Basin Dam Safety Best Management Initiative The Pascagoula River is the largest by volume unimpeded river in the contiguous United States. However, there are several dams that were set in pace to create reservoirs that help control flooding in the region along tributaries and streams that feed into the Pascagoula River. These dams are largely managed by the Pat Harrison Wateraway District but several are managed by private landowners. The Pascagoula River Basin Dam Safety Best Management Initiative will ensure a cohesive inspection and monitoring plan is set in place. Through best management practices and coordination with private landowners, the initiative seeks to mitigate risk of dam related emergencies within the region. The formal guidelines will ensure dam owners coordinate with emergency management authorities to facilitate the development of plans that are comprehensive and consistent. As part of the comprehensive planning in the region, a second phase including analysis of dams considered at risk or demonstrating structural deficiencies will be completed to further mitigate dam failure threats.	Stone, Mobile, Jackson, Pearl River, Forrest, Perry, George	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	2128	9/25/2014	Impact of Suspended Sediment, Water Circulation, and Waves on Marshes and Oyster Beds	We propose to deploy four moorings equipped with a downward looking RDI WorkHorse Sentinel ADCP to measure the currents, Reynold stresses, and suspended sediment concentration (SSC), a Valeport MIDAS DWR Directional Wave Recorder, and four Sondes YSI 6600EDS to measure various parameters such as temperature, dissolved oxygen, salinity, turbidity, and chlorophyll at different depths. The moorings will be deployed for two years. They are placed at four locations for one year and then moved to another four locations for the second year. Guidance for these choices of mooring locations will be gained through application of the SWAN wave prediction model. The moorings will be placed near oyster reefs and/or marshes, preferably in water depths of at least 2 m. We plan to deploy moorings at healthy reefs or marshes and at unhealthy reefs or eroding marshes. Whether we choose reefs or marshes may depend on recommendations from the RESTORE council. If our mooring locations overlap with the moorings that are part of the â€œMississippi Coastal Observing and Prediction Networkâ€ also submitted to the RESTORE council, we will consolidate instruments to reduce costs. To calibrate the SSC ADCP measurements, we will perform monthly surveys at each mooring. These cruises will also be used to maintain the moorings and replace the battery packs. We will measure conductivity and temperature with a lowered CTD and take water samples at various depths. The SSC in these water samples is measured using a filtration system. In addition we will collect bottom sediment cores during each survey to measure the grain size distribution and sediment properties in order to determine the critical shear stress needed for sediment resuspension. The currents recorded with the ADCP and the orbital velocities estimated from the wave heights will indicate how often these critical shear stresses are exceeded, and provide insight into the active governing processes. The sediment distribution, shear stress and moored time series gathered as part of this project will all be leveraged by the modeling efforts submitted separately to the RESTORE council as â€œThe Influence of River Plumes, Hurricanes and Storm Fronts on the Hydrodynamics of the Mississippi Bightâ€ In that suite of model-driven investigations, coastal erosion and oyster bed viability were not focal points, so within this proposal our ROMS model implementation for MS will be expanded to handle wetting and drying (Warner et al., 2013), as well as wind-wave coupling and the sediment transport capabilities of the ROMS-based Coupled-Ocean-Atmosphere-Wave-Sediment Transport (COAWST) model system (Warner et al., 2010). The comprehensive set of in situ measurements will provide a rich data set that reveals key mechanisms associated with sediment loading within the MS, which will inform the development and validation of this near-shore model. With validated erosion and suspended sediment distributions, the model will be positioned to provide insight into oyster bed viability, marsh and barrier island erosion assessment, as well as key water quality constituents that directly contribute to marine ecosystem function. Deliverables include geospatially referenced sediment core, critical shear stress, time series of collected data and maps that indicate which marsh coastlines are most threatened and what locations may be most viable for oyster reefs.	Harrison, Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes		Yes		$ 1,640,000.00	$ -	
	Research and Education	2129	9/26/2014	Quantifying Water Quality Using Remote Sensing for the Gulf of Mexico	Since this project is Gulf wide, was interested in being considered for Council funding; however, just implementing same proposal in MS waters would be a great benefit to DMR and DEQ's day to day operations. The proposed effort will address the RESTORE Council priority area â€œWater quality monitoring and improvement.â€ The project will focus on establishing a time series (2013 â€“ 2017) of satellite-based water quality products with improved spatial and temporal coverage. Water quality improvements to be achieved include detecting and monitoring: a) coastal river and land discharge points and impacts to estuarine systems; b) spread and dissipation of point source discharges; and c) tracking water quality changes from river discharge. The project will provide for the efficient and effective direction of public resources for the purposes of protecting public and environmental health. Present water quality monitoring programs are limited in the spatial and temporal coverage and cannot rapidly address if abnormal water conditions are occurring. By combining with daily satellite properties this will be remedied and enable rapid assessment of atypical water quality evident with enhanced spatial extent. Decision makers will be provided a capability to respond rapidly and send sampling collection and clean up actions. By continually satellite monitoring the impact of cleanup activities can be confirmed that water quality has returned to normal conditions. Outcome from this project will be improved water quality management in areas along the gulf coast. Decision makers in each stateâ€™s environmental quality agency will have access to an automated web based decision aid that uses real-time satellite data with automated algorithms based in Best Available Science to facilitate critical decisions based on timely and accurate information. Please see detail proposal with description, benefits, and tentative Partners-- Proposal is scalable from just MS waters to the entire Gulf of Mexico.	Harrison, Jackson, Hancock, St. Tammany, Mobile	Yes	Yes	No	Yes	Yes	Yes	Yes	20	Yes		$ 12,000,000.00	$ -	

	Research and Education	2133	10/1/2014	Surface Currents and Wave Monitoring for the Gulf of Mexico	The U.S. Gulf Coast is vulnerable to a variety of risks, including oil/contaminant spills, harmful algal blooms (HABs) and Vibrio, hurricanes, coastal land loss, and navigation accidents. Near real-time information on coastal ocean surface currents, waves and winds are an important element of a coastal ocean observing system necessary for mitigating these risks and for protecting public health and safety, emergency response, the coastal economy and sustainable use of coastal resources. This environmental intelligence, which can be gained through a system of coastal High-Frequency Radar (HFR) stations, can, for example: (1) Improve monitoring of restoration projects (sediment transport, water quality), (2) Help track spilled contaminants and Harmful Algal Blooms to protect public health, water quality, and critical habitats, (3) Help ensure safe commercial and recreational navigation, (4) Enhance search and rescue efforts, (5) Improve ocean and weather forecast models, including those for storm surge, (6) Enhance public beach safety through the forecasting rip currents, and (7) Enhance community preparedness for coastal land loss issues. This project meets the RESTORE Act Plan Comprehensive Plan priorities for habitats, water resources, living coastal and marine resources, natural processes and shorelines, and science-based decisions by developing a U.S. Gulf-coast wide network of High Frequency Radar stations to provide real-time monitoring of surface currents and waves in State waters. These stations are efficient, effective tools for meeting multiple public needs along the U.S. Gulf Coast. The proposal includes Project Management for the procurement, installation, and operation for these sites across the Gulf Coast. Also, includes Data Management for the design and integration to assure data meets all RESTORE-Act Policies and Procedures. Real-time distribution of these data to numerical models, and agency decision makers are included. An Outreach component is included to work with the Public and Agency Decision Makers, to assure the understanding and training is in place to integrate these user-friendly products in to day to day operations of each agency.	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	20	Yes		$ 20,000,000.00	$ -	
	Research and Education	2134	10/1/2014	I-110 Corridor Restoration & Enhancement	The City of Biloxi proposes to implement its 1980s master plan for utilizing the corridor of public land located under Interstate 110, which runs north-south from the Back Bay of Biloxi to the Mississippi Sound. The original master plan, developed with considerable citizen input, is being updated to include storm water management improvements and acquisition/restoration of a wetlands area adjacent to the I-110 Corridor, north of Division Street. Storm water management improvements will include installation of BMPs along the corridor to filter nonpoint source pollutants from the interstate's storm water that drains unchecked from the elevated roadway. The BMPs will have an educational component, identifying their function in improving water quality through all-weather signage located along the walking paths that currently exist (and which are to be enhanced with additional lighting and drainage). Public safety and recreational amenity improvements will expand use of this area by residents and tourists. The south end of the corridor is located immediately west of the minor league baseball stadium being built and the Beau Rivage Casino Resort. The north end includes an under-utilized boat ramp, basketball and tennis courts, all of which are in need of improvements and lighting. Acquisition and restoration of the wetlands area north of Division Street will include removal of invasive, nonnative plant species as well as accumulated debris. Sediment will removed and appropriate wetlands plant species will be installed to restore the natural functions of the wetlands area that is tidally-influenced by the Back Bay of Biloxi. The master plan will be scanned and uploaded as an attachment to this project proposal.	Harrison	Yes	No	No	Yes	No	Yes	Yes	20	Yes	storm wat	$ 6,000,000.00	$ -	
	Research and Education	2135	10/1/2014	Biloxi Peninsula Shoreline Stabilization and Public Access Improvements	The City of Biloxi proposes to implement a variety of shoreline stabilization measures along the Biloxi Peninsula in areas owned and/or managed by the City to control erosion, adapt to sea-level rise and improve public safety and access. Shoreline improvements will include stormwater management BMPs accompanied by all-weather educational signage to identify short- and long-term public benefits of a properly-managed waterfront. Improvements will include removal of nonnative, invasive plants species; installation of appropriate native plant species to support shoreline stabilization and restoration of shoreline habitats; removal of concrete, riprap, abandoned/obsolete infrastructure and miscellaneous debris; and stormwater management improvements to improve water quality. Public safety and access improvements will include provision of lighted, ADA-compliant boardwalks, where appropriate, designed for storm resistance and to be constructed with a variety of materials as dictated by the terrain and proposed use. Some of these public access areas will include short fishing platforms/piers depending upon adjacent land and water uses and subject to federal and state permit approvals. Some of the public access areas also will include boat ramps for launching motorized and/or nonmotorized (kayaks, canoes) boats along with supportive parking areas.	Harrison	Yes	No	No	Yes	No	Yes	Yes	30	Yes	stormwat	$ 15,000,000.00	$ -	
	Research and Education	2138	10/4/2014	Mississippi Gulf Coast Litter Control	This project would provide for a permanent effort to control litter in the three coastal counties and the near shore environments for the purposes of ecosystem restoration AND increased tourism. Permanent staff would be hired to work with cities, counties, law enforcement, private business and community groups to identify and implement a range of litter reduction strategies including: on-going public information campaign, increased enforcement of litter laws, and improvement of laws and regulations if needed. All of our roadways, waterways, and drainage areas have plastic items, cigarette butts, fast food wrappers, drinks cans scattered along them. These items leach dangerous chemicals, harm wildlife and pollute our waterways. They create an unfavorable impression for visitors.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	Yes	No		Yes		$ -	$ -	
	Research and Education	2139	10/6/2015	Reduction in post hooking sea turtle mortality	This proposal will develop new technology to reduce sea turtle mortality by developing methods to remove fishing line without removing endangered sea turtles from the water. This new method will be designed for inshore fishing from piers and bridges . The Endangered Species Act can shut a fishery down after a certain number of takes accure. The device I have designed will not require a fisherman to haul the turtle up in the air to the pier surface inorder to cut the line from the hook.. We will collect data and film our interactions with the device and the line. I will call IMMS to come collect the turtle. After proof it works as it should then we will share our information.IWe will then do outreach and education to encourage the use of this technique by our Coastal recreational fishermen. This new technique will address the problems that our recreational fishermen are having in removing their fishing line from the turtles that they are interacting with while fishing in state waters. There has been increase interaction with these endangered species and this new technique will help with their protection. We will then be able to expand the use of this new method to other areas to help address their interactions with these endangered sea turtles. This device could be used as a midigation tool for a section 10 permit for the states. The data shows that these sea turtles die from becoming entangled in the line that was cut from the pole and left on the hook. A turtle can survive a hook but not fishing line. It causes them to drown and get infections. The new device would slid down the line and cut the line off at the hook without harming the turtle. This is a win for the turtle, the fishermen and the economy because our piers were not closed and I will supply as many as possible free to the states, the stranding team and fishermen. When this new technique is proven successful. A full report of the study and success of the new gear will be provided to All Gulf Coastal states and NOAA. This project will include providing new gear to be given to Mississippi recreational fishermen as long as the supply of gear is available in this pilot.	Jackson, Hancock, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	25	No		$ 500,000.00	$ -	
	Research and Education	2141	10/8/2014	Gulf of Mexico Alliance Restoration Coordination	The proposed project provides programmatic support for the Gulf of Mexico Alliance's collaborative partnership to coordinate restoration-related activities among the various agencies, organizations, resource managers, scientists, consultants, and industry experts in the region. The Gulf of Mexico Alliance proposes to conduct the coordination through its priority issue teams that are well-established and in direct alignment with the goals of the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan. Coordination provided by the Gulf of Mexico Alliance provides the initial core steps in addressing a concern that restoration projects and programs conducted in the Gulf are not being coordinated to maximum efficiency. While Council-level activities are highly coordinated by the RESTORE Council, the Gulf of Mexico Alliance provides the venue for on-the-ground resource managers, scientists, consultants, and industry experts to communicate and collaborate on a regular basis regarding the activities that are being conducted by many regional partners. Deliverables include reports identifying the following: -On-going list of projects being implemented either as a result of DWH-funded settlements or other non-DWH project efforts (an online feature could be added as appropriate); -Projects that may have overlap and duplicity with recommendations for solutions to leverage resources; and -Regional initiatives that may impact or inform restoration. Through the priority issue teams and the larger partner network as a whole, agencies and organizations involved in restoration activities will be better informed and able to make project implementation decisions with the maximum available information regarding on-going efforts in the region. As a result, priorities can be aligned, activities can be planned with minimal duplication, and leveraging opportunities can be identified. The overall budget request is $467,500 per year for five years or $2,337,500 total.	Gulf of Mexico	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 2,337,500.00	$ -	
	Research and Education	2143	10/8/2014	Watershed Assessment Tool for Coastal Restoration	This project will utilize the resources described below to construct, maintain, and utilize a watershed assessment tool for coastal restoration. This tool will allow interactions with resource managers such as the Mississippi State Department of Environmental Quality and the Mississippi Department of Marine Science to assess both project and cumulative impacts of restoration activities. This tool will be calibrated and verified with scientific field and laboratory investigations and in conjunction with ongoing monitoring conducted by the Mississippi Department of Environmental Quality and the Mississippi Department of Marine Resources. Improved water quality is essential to restoration of coastal habitats and is among the highest priorities identified by Mississippi stake holders. An ability to assess watershed process that contribute to degraded water quality is a necessity to identify activities within the watershed that can lead to improvements. Watershed management activities such as stream restoration, best management practices in agricultural areas, and low impact development practices in urban areas are all techniques to improve water quality. Consequentially, monitoring and modeling of freshwater inflows into the Mississippi coastal systems is required to assess the sustainability of ongoing and planned restoration. Researchers at Mississippi State University (MSU) are well experienced with the Watershed Modeling System that contains watershed and water quality models and Geographic Information Systems that are used in detailed watershed assessments. MSU has also conducted water quality modeling in Saint Louis Bay, numerous studies of coastal habitats such as beach erosion, stream restoration, and bank/shoreline stabilization. Additionally, MSU has acquired a complete hyperspectral data set for Grand Bay National Estuarine Research Reserve for habitat delineation and quality assessment. MSU will also have a complete data base of high resolution topography using Light Detection and Ranging (LiDAR) for the 6 counties of the gulf coast by spring of 2015. These data will provide hydrographic maps for use by state and county managers and baseline conditions for hydrologic modeling. Mississippi State University researchers have extensive experience in watershed management practices to improve water quality. For example, wetland construction and restoration to improve water quality and riparian stream restoration for both habitat and water quality improvement are major components of applied research at MSU. The Watershed Assessment Tool will be calibrated and verified with field and laboratory studies and applied to restoration projects in the watershed to evaluate effectiveness. Workshops will be conducted with state and local resource managers to ensure that ongoing and proposed projects are effectively evaluated for hydrologic assessment and potential for water quality improvement. Public outreach will be conducted with production of reader friendly brochures. This is a four year project and will supplement ongoing planning activities as well as serve as decision support tool as new projects are recommended. The estimated cost is $800,000 per year for a total cost of $3,200,000.	Hancock, Stone, St. Tammany, Mobile, Jackson, Pearl River, Forrest, Perry, Orleans, Harrison, George, Washington	Yes	No	No	Yes	No	Yes	No		No		$ 3,200,000.00	$ -	
	Research and Education	2149	1/1/2015	Edible Forests of the MS Gulf Coast	This project will develop fruit orchards in every city and county in the three county of the MS Gulf Coast, Harrison, Hancock and Jackson counties. The Mississippi Urban Forest council will partner with our Tree City communities along the coast, local garden group and civic groups to develop the orchards. Training will be provided to citizens and those involved in the development of the orchards. Oversight for long term maintenance will be provided. Correct fruit varieties for the area, soils and climate will be taken into account for selection of species. This project will provide model orchards, encourage more local fruit production, provide education to implement sustainable orchards, improve healthy eating and provide sources of value added products for local citizens.	Jackson, Harrison and Hacnock	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 450,000.00	$ -	

	Research and Education	2154	10/24/2014	Projecting the Impacts of Restoration Activities in MS Coastal Waters	The overarching objective of this project is to advance our informational basis of physical-biogeochemical linkages in the Mississippi Sound (MS) and northern Mississippi Bight (MB) region through execution of a field effort consisting of research cruises and moorings that obtain measurements needed to inform a state of the art modeling approach. The observations will characterize bottom sediment type, seasonal variation in sediment, nutrient and dissolved oxygen distributions, resuspension and transport of sediments under influence of wind forcing and surface waves, and hydrodynamically driven material exchanges between the MS and MB. The model system, supported by this knowledge, will be a platform that allows resource managers and restoration scientists to project the impact of RESTORE activities, thus enabling better-planned restoration efforts that have a higher likelihood of sustained success. Numerous coastal restoration projects in the state of MS have been proposed to meet RESTORE program goals http://www.msrestoreteam.com/ppp/overviewmap.html. Some of these efforts aim to restore hydrology patterns, marshes and barrier islands with the intent of mitigating the issues noted above, among others. In order to fully remedy harm and reduce risk to the natural resources of the Mississippi Gulf Coast, comprehensive understanding of the MS is required. Without this understanding, well-intentioned RESTORE projects may realize short-lived success. The overarching goal of the combined observational and model synthesis approach we have proposed herein is to advance our informational basis through execution of a targeted field effort and integrate the acquired knowledge into a state of the art modeling approach that will enable better-planned restoration efforts, with higher likelihood of sustained success, as well as advance our understanding of current and future vulnerability. To attain the needed informational basis on waves, currents, sediment transport, and distributions of sediment, nutrients and dissolved oxygen, we propose to utilize moored instrument arrays and shipboard sampling to record the critical physical, geochemical and bio-optical measurements needed to characterize the processes and distributions of interest. These measurements will be used to inform and validate a model system that simulates the circulation, waves, sediment loadings and biogeochemistry of the MS and the hydrodynamic and material exchange with the MB. The resulting modeling system will be ideally suited as a tool for scenario exploration that provides assessments and insight into the viability of proposed restoration projects and resource management strategies. In particular, the model will provide temporally varying distributions of nutrients, dissolved oxygen, salinity and suspended sediment, all of which contribute to vitality of ecosystem function in the MS.	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	Yes	15	Yes		$ 1,100,000.00	$ -	
	Research and Education	2155	10/27/2014	Establishment of an Algae-for-Aquaculture Center for Mississippi	PI for this Project: Dr. Gordon Cannon, Vice President for Research USM The global population is rapidly increasing and is expected to surpass nine billion by 2050. As the population continues to grow, the ability for the world to feed itself will become increasingly more difficult. Environmental factors and limitations on water, land, energy, and other vital resources will further stress food production throughout the world. New technologies that do not compete with current human food production resources and processes are urgently needed to support the growing food demand. Fish are a major source of high-protein food, and the demand for fish is increasing world-wide at a rate approximately double that of population growth. The worldâ€™s oceans, however, cannot meet the increasing demand for fish, so aquaculture production must continue to expand to bridge the growing gap between what the oceans can provide and what the world demands. High-protein fish require high-protein diets, and fishmeal, the primary source of protein in marine speciesâ€™ diets, is in short supply given that it is derived from the worldâ€™s oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the worldâ€™s oceans and does not compete with terrestrial food production is urgently needed. Algae are a promising candidate for fishmeal replacement (some species have protein levels in excess of 60%), and the State of Mississippi has the climate and resources necessary to support efficient algal biomass production. Further, the University of Southern Mississippi (USM), through its Gulf Coast Research Laboratory (GCRL) and Thad Cochran Marine Aquaculture Center (CMAC) affiliates, has the marine biology and aquaculture expertise necessary to understand algal biomass utilization and to ultimately validate algae as a fishmeal replacement in future aquaculture feeds. General Atomics (GA) proposes to team with USM to establish an algae-for-aquaculture research center to demonstrate the value of algal biomass as a high-protein ingredient in future commercial aquafeeds. A research-scale algae growth facility utilizing GAâ€™s existing technology will be constructed at USM, on or near the grounds of the GCRL. Algae strains high in protein will be the focus for research. The facility will initially utilize algae strains provided by GA, but subsequent efforts will utilize local Mississippi algae strains, after suitable isolation and optimization at GA. The algal biomass produced will be used to conduct fish feed trials at CMAC using the substantial aquaculture research infrastructure already present as well as the cell biology, marine science, and analytical support capabilities of USM. The results of initial fish feed trials will be used to modify algal strain selection and/or algal growth parameters as required to improve the overall fish health and growth rate observed in subsequent feed trials. The program will also allow USM to establish an aquafeed formulation and feed production capability which bridges the gap between algal growth and aquaculture feed and will provide more timely response to feed variation requirements. The initial program is expected to run for 24-30 months. This will allow for construction and systemization of the algae growth facility and installation of the supporting analytical equipment and procedures, estimated to require 9-10 months, followed by operation of the facility for 15-20 months. After several months of algae growth, the initial algal biomass will be available for inclusion in feed formulations supporting fish feed trials. Fish species of interest include Sea Trout, White Sea Bass, Red Snapper, and Cobia. Additional feed trials will be conducted at prescribed intervals as additional algal biomass is produced. The goal will be to show that algal biomass-containing aquafeeds yield a final fish product with health, growth, and taste comparable to that produced with current fishmeal feeds. Proof of the value of algal biomass as a substitute for fishmeal will confirm the economics of algal biomass production and will enable the establishment of commercial-scale algae growth facilities within Mississippi and elsewhere in the U.S. and the world. The benefits to the State of Mississippi associated with establishment of an algae-for-aquaculture industry are many and include: (1) Establishment of a world-class algae-for-aquaculture research center at USM; (2) Establishment of a new high-tech farming industry that can be exported to numerous other areas in the U.S. and the world; (3) Development of new high-tech jobs associated with high-protein algae production, feed formulation and production, and aquaculture; (4) Utilization of the Stateâ€™s abundant natural	Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 12,000,000.00	$ -	
	Research and Education	2156	10/28/2014	Synthesis and Decision Management Products	This proposal for an Adaptive Management Decision Tool, is one of the 34 proposals in USM's Comprehensive and Integrated Observation, Monitoring, Mapping, and Modeling Plan for MS. We propose to implement management strategy evaluation (MSE) models consistent with the analytical needs of the monitoring program. A MSE is a comprehensive model that includes the population dynamics of the resource, the economic components impinged by the resource (e.g., the fishery for an exploited resource; the business for a farmed aquacultured resource, such as aquaculture or mariculture operations; the value of ecosystem services for a keystone or foundational resource), and the management and political structure leading to the definition and implementation of policy and regulation. The goal of a MSE is to evaluate, using a numerical model, a range of management options to determine the most effective approach to resolve problems. MSEs are most often invoked when problems are complex, typically cross-cutting scientific disciplines, management agencies, and regulatory bodies, and typically grounded in hard science issues, but influenced by a myriad of human and natural components of the system. We describe two examples of problems that would require an MSE model for effective decision management: (1) Marine diseases increasingly affect the integrity of keystone, commercially important, and ecologically dominant species. Oysters, shrimp, and blue crabs are examples. Should we incorporate disease management into the management of resources significantly impacted by disease? What are the Best Management Practices (BMPs) to respond to these challenges? How do we determine the BMP for any given event? Can we respond in a timely fashion to prevent expansion of or mitigate the damage caused by an epizootic once it occurs? Answers to these questions will allow Mississippi marine resource management and scientific communities to be better positioned than they are at present to respond to these eventualities. Some pathogens are capable of introducing enduring regime shifts by modifying habitat structure and function, food web structure, or genetic connectivity, thereby institutionalizing significant economic and ecological damage, making the present-day limited level of preparedness of noteworthy concern. Dermo in oysters is a classic case wherein a disease is capable of generating a permanent regime shift brought on by the loss of reef habitat. (2) One important option for an MSE is to assess options for carbonate management in the coastal zone, to identify the risks of management choices, to weigh long-term outcomes against short-term economic and ecological gains, and to understand the scientific basis for parameterizing carbonate destruction and mass balance models. Management of the habitat quality and natural resources of the estuaries and lagoons of the U.S., a dominant focus of public, private, and academic interests for a half century or more, is receiving even more scrutiny as goals become more stringent, desirable outcomes harder to achieve, and the cost of management more expensive. A wide range of management decisions are driven by resource needs dependent upon carbonate. The challenge of meeting a diversity of resource goals depends upon wise use of the carbonate resource, but rarely can short or long term outcomes be predicted in terms of carbonate balance, and more unfortunately subsequent retrospectives often identify consequences of carbonate imbalance that motivate further management measures of equally uncertain outcome. Therefore, the ability to model the ecosystem, to assess risk, and to develop management strategies all in terms of the carbonate budget is a primary challenge facing the management and user communities of the coastal zone. An MSE is a mechanism to evaluate best management practices. One should be implemented prior to the implementation of any large-scale restoration or management plan. Thus, the MSE provides the basis for wise investment of RESTORE or other State or National resources destined for investment in the restoration of the coastal ecology and/or the management of the coastal resources of Mississippi. In addition, comprehensive MSE models include an economics component that will inform the stakeholders concerning the relative economic benefit of various management and restoration options investigated by the MSE. The MSE is an objective way to evaluate economic benefit and the potential for economic development.	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,800,000.00	$ -	
	Research and Education	2161	6/1/2015	Mercury Methylation Rates, Isotopic Composition, and Trophic Transfer in the Northern Gulf of Mexico	Mercury Methylation Rates, Isotopic Composition, and Trophic Transfer in the Northern Gulf of Mexico James Cizdziel, Ph.D., University of Mississippi The Problem. There is a significant gap in understanding the sources and pathways of methylmercury (MeHg) entry into food webs in the northern Gulf of Mexico (GoM). This is of particular concern because, on average, residents of the Gulf Coast consume more marine fish than other U.S. residents, and because GoM fish tend to have higher levels MeHg than fish from other coastlines.1,2 Indeed, as much as 30% of the coastal population is estimated to exceed EPAâ€™s reference dose for MeHg, which is used as a criterion to protect human health.3 Moreover, with the economy of the Gulf coast states intricately linked to the GoM through fishing (both commercial and recreational), understanding the distribution, levels and cycling of Hg species is vital to the long-term health and stability of the region. Recognizing this, the National Science and Technology Council issued a 2004 report on â€œMethylmercury in the Gulf of Mexico: State of Knowledge and Research Needsâ€ identifying major data and knowledge gaps.4 Nearly a decade later the Gulf of Mexico Alliance, Water Quality Team, Mercury Workgroup, developed a White Paper titled â€œMercury Fate and Transport: Applying Scientific Research to Reduce the Risk from Mercury in Gulf of Mexico Seafood.â€ The document lays out many of the same scientific research priorities with the goal of mitigating risk of Hg exposure to humans. Yet there remains a paucity of measurements of MeHg in the Gulf and virtually no progress in answering fundamental questions such as: where in the GoM is MeHg, and where is MeHg most bioavailable (i.e. where does the majority of MeHg enter the foodweb?). The time for action is now. Below is a plan that includes innovative analytical techniques that would finally help to answer these questions. Objectives. The objective of this work is to quantify and compare MeHg levels, isotopic compositions, and Hg methylation rates in a key estuary and coastal area in the northern GoM. We will, for the first time, use recently developed analytical approaches to trace the sources and movement of MeHg from sources through phytoplankton and other primary producers to fish. The educational objective is to work directly with students, including those from Historically Black Colleges and Universities (HBCUs). Research Approach and Innovation There are few measurements of MeHg in the GoM and its estuaries, and this critically limits our ability to assess the sources of MeHg that end up in GOM seafood.3 Estuaries play an important role in the production and transfer of MeHg into primary producers (the key entry step into food webs), and, in some cases, are â€œhotspotsâ€ for MeHg, serving as net sources of the toxin to the ecosystem. Moreover, estuaries have oxic-anoxic fluctuations that affect the bioavailability of Hg. We will provide a comprehensive examination of Hg cycling in an estuary and coastal area in the northern GoM. It includes methylation rate measurements, MeHg in phytoplankton and bacteria (a key entry point for MeHg in food webs), and stable Hg isotope measurements, an exciting new approach to studying Hg biogeochemistry. The research will provide essential information for predictive models that tie Hg sources, environmental conditions, and MeHg levels in Gulf seafood, which in turn is necessary to guide efforts to lower MeHg levels in fish. The PI brings significant resources to bear on the project, including collaborations with leading researchers in the field, sensitive Hg-specific instruments, and a high resolution mass spectrometer. Methylation rate study. Measuring the rate of MeHg production in sediment from locations with different environmental conditions, allows not only spatial comparison of the strength of MeHg sources, but also elucidation of the factors controlling MeHg production in the first place. In methylation studies, an isotope of Hg (e.g. 199Hg) is injected into sediment collected in the field, altering		Yes	Yes	No	No	No	Yes	No		No		$ 120,000.00	$ -	
	Research and Education	2162	11/5/2014	Enhancing Community Resilience with Social Media	Social media constitutes an important new form of communication-based social capital that can have profound effects for individuals, communities, and organizations, including their capacity to respond to emergency situations. Leveraging the ongoing research conducted by the Social Science Research Center (for the purpose of the grant awarded by Coastal Storm Awareness Program - C-SAP, Connecticut, NOAA), with the overarching goal of validating the role of social media as a key communication tool between emergency management agencies and affected communities, researchers propose a real-time communication system (relying on the social network Twitter) to improve community resilience in the Mississippi Gulf Coast areas. The communication system would be an organic network of local governments, emergency management agencies, businesses and individuals/communities who choose to participate in the network. The system will also leverage the models developed for C-SAP research by implementing machine learning and geo-spatial analysis tools to monitor relevant social media messages during the occurrence of an adverse physical event (such as weather emergency). Administrative agencies such as local governments, emergency management, and community representatives can utilize the system to address concerns of the public and help disseminate important weather related information via the network. The communication system will also provide tools for identification of key influencers in the network to provide an effective medium for information coverage/dissemination. In addition to functioning as a public advisory mechanism during adverse events, the system can also act as a discussion platform between governing officials and their residents thereby promoting public discussion of key topics related to the betterment of communities and their individuals. Another application area of the system can be as an information source where, individuals pose questions to government officials or administrative authorities. Thus, the overall goal of the proposed system is to enhance the engagement of local communities and administrative authorities in order to promote locally driven solutions for planning, risk assessment and natural resource management within communities. The proposed system will be based on a web-based application platform for ease of access to any individual with access to Internet and a computer/smart device.		Yes	No	Yes	Yes	No	No	Yes	5	No		$ 450,000.00	$ -	

	Research and Education	2163	2/2/2015	Oyster Bayou Restoration Project at Beauvoir	The purpose of this project is to implement the recommendations of The Nature Conservancy (TNC) assessment of Oyster Bayou. The plan is to assess the conditions within the Oyster Bayou drainage basin and develop a list of drainage improvements that can be implemented by stakeholders to improve drainage and habitat conditions. Oyster Bayou is a small tributary to the Mississippi Sound that meanders through the 52 acres of historic grounds of Jefferson Davis' mansion know as Beauvoir. Oyster Bayou was once part of a relatively large drainage basin that extended west and north of Beauvoir and Beauvoir Road. The drainage basin has been extensively developed with little regard for comprehensive and coordinated stormwater management within the basin. As a result, there has been an increased volume of water that flows through the lower portions of Oyster Bayou causing minor flooding and erosion which has impacted the natural habitat along the bayou. The objectives of TNC's assessment are to 1) evaluate upstream drainage conditions that result in discharges if stormwater into Oyster Bayou; 2) work with Beauvoir representatives and other stakeholders to assess opportunities for additional stormwater treatment functions of Oyster Bayou; 3) assess water flow characteristics and methods to stabilize and enhance areas along the 2,250 linear feet of riparian habitat associated with the system; and 4) implement selected ecological restoration activities within the Oyster Bayou drainage basin. The goal of Beauvoir's project will be to implement upstream drainage features west of Beauvoir Road that contribute to the quality and quantity of stormwater that discharges to Oyster Bayou; improve assimilative capacity and stormwater treatment functions within the drainage basin which will lead to enhanced water quality benefits and improved aquatic and terrestrial habitats adjacent to Oyster Bayou; provide additional water quality benefits and improvements for this tributary to the Mississippi Sound; implement ecological restoration activities within Oyster Bayou drainage basin; and provide education and outreach activities. Further restoration actions for the stream and adjacent uplands are also part of this project including an assessment of the stream by a biohydrologist (since the flow/velocity is higher that would have been naturally due to much of the watershed being paved/channelized, increasing runoff), as well as, an assessment of current impediments to the flow of the stream (roads, etc.) and determine if a more â€œstream friendlyâ€ design could be beneficial. The use of natural grade control structures (i.e., logs and tree stumps) to slow down water, which leads to erosion of the banks could be used to trap sediment coming downstream. Removal of non-native, invasive species such as Chinese tallow tree, privet hedge, etc. (these would be removed physically or killed by herbicide). Ornamental species that are not invasive, such as camellias and azaleas would remain as part of the grounds. Planting of native trees and shrubs such as cypress, sweet bay, black gum, etc., plus plantings of native grasses and forbs such as Juncus including plants important to wildlife. Woods mowing to open the shrub layer on the nature path, bird nesting boxes along the stream (bluebird, wren and duck) and osprey nesting platforms would be added. An extension of the nature path throughout the property is also part of this project. All of this would be done in regards to the historic nature including interpretive exhibits along the bayou that points to different animals/birds/plants one is likely to encounter would be added. Lastly, education and outreach upstream regarding trash that is being dumped into the parking lots, storm drains, etc. including a trash collection device that would be located just downstream of the coliseum. Oyster Bayou and its adjoining bayhead swamp comprise approximately half of the Beauvoir 52-acre estate in Biloxi, MS. Operated through a 501(c)(3) nonprofit organization, Beauvoir is one of two National Historic Landmarks in South Mississippi and is open to the public every day of the year except Thanksgiving and Christmas. The estate, the last home of Jefferson Davis, includes a House	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	2164	11/6/2014	Monitoring and assessing the health of coastal marshes with remote sensing	Overview and Motivation: Coastal marshes are a critical habitat needed for a healthy Mississippi Gulf Coast. These marshes provide many ecosystem services including; buffers to dampen hurricane waves, habitat for breeding coastal birds, and filtration of terrestrial runoff. Restoration marsh grasses in the Mississippi Gulf Coast is important to restoring the Mississippi Sound estuary. Before these critical habitats can be improved however, we must understand their current health so that we can monitor improvements in marsh grasses and their contribution to the ecosystem services. Project Goal: Use remotely sensed data to assess the marsh grass extent, health and vigor in the three coastal Mississippi counties and monitor changes over time as restoration projects proceed. Project Description: Before coastal marshes can be restored along the Mississippi Gulf Coast, there must be a complete assessment of their extent, health and condition. This assessment must be completed for the entire Mississippi Gulf Coast synoptically so that differences in marsh grass are due solely to health and condition and not seasonal variations. Medium resolution remotely sensed data, such as Landsat 8, has the spatial extent needed to cover the Mississippi Gulf Coast and create a synoptic assessment of the coastal marshes. Using the spectral data of these sensors, we can create indices that illustrate plant vigor and health. Where more detailed analysis is needed, high resolution, commercial satellite imagery will be utilized to create in depth analysis of coastal marshes. This synoptic assessment of Mississippiâ€™s coastal marshes is the first step in developing a program to monitor the changes as restoration proceeds. A well-defined starting assessment is needed to measure the effectiveness of a restoration project. The imagery and image processing techniques to be used are well accepted, scientifically evaluated tools that provide consistent and repeatable results. Budget and Timeline Landsat data is distributed by the U.S. Geological Survey for no cost and this imagery will be used for the synoptic assessment of the Mississippi Gulf Coast. Higher resolution commercial imagery can be obtained for $ 27 km2. Completion of the assessment will require 3-4 person months, for a total estimated budget for initial assessment of $50,000. Monitoring of the marsh restoration can be completed yearly, using Landsat 8 data, at a cost $12,000 to $15,000 per year.	Hancock,Stone,St Tammany,Mobile ,Jackson,Pearl River,Harrison	Yes	No	No	No	No	Yes	No		No		$ 65,000.00	$ 25,000.00	
	Research and Education	2165	11/7/2014	Environmental Geophysics Measurements for Coastal Restoration	Environmental Geophysics Measurements for Coastal Restoration Dr. Craig Hickey, Dr. Leonardo Macelloni, Dr. Arne Diercks Description: The University of Mississippi proposes to employ relatively inexpensive acoustic, seismic, electrical and other geophysical surveying techniques to collect dense subsurface spatial information about barrier islands, marshlands, and coastal environments that have been negatively impacted by human and natural events. This information will compliment information gathered from visual inspection, local sampling, and remote sensing, creating a more complete picture to inform coastal restoration efforts, including restoring wetlands and barrier islands using dredged sediments. Impacts to the Mississippi Gulf Coast are due to human modification of rivers and streams flowing into the Gulf altering the sediment deposition patterns as well has natural events such as hurricanes which can alter large sections of the landscape. Mitigating or reversing these impacts requires restoration of wetlands and barrier islands using dredged sediments, reintroducing native plants, and reversing alterations to rivers and protecting shorelines from erosional forces. These restoration projects require a multidisciplinary group of scientists equipped with the best information attainable. Much of the information is obtained by visual inspection and measurements obtained by local sampling. Spatially dense information is obtained from remote sensing but the same is not usually obtained for the subsurface. Geophysical investigations are an indirect method of obtaining generalized spatially dense sub-surface geologic information by using special instruments to make certain physical measurements (Reynolds, 2011). Near surface geophysical techniques have been used for geotechnical and environmental problems and several handbooks describing their use have been published (EPA, 1993; ASCE, 1998). A recent handbook has been published on agricultural applications (Allred, Daniels and Ehsani, 2008). Numerous geophysical methods are applicable to coastal restoration and include: acoustic/seismic, electromagnetic and resistivity, gravity, optical sensing, radar, magnetics, as well as others. Most methods can be used on land, within the transition zone (marsh areas), and in the water. Geophysical surveying provides unique and valuable subsurface information to assist with the evaluation of barrier islands, marsh lands, and coastal environments. It has the potential to provide information about the onset of subsidence, location and extent of freshwater aquifers, locations and extent of salt water intrusion, and the location and amount of sand reserves for coastal restoration projects (Andrews et al., 2007). The cost of geophysical explorations is generally low compared with the cost of core borings or test pits, and considerable savings may often be affected by judicious use of this exploration method in conjunction with other methods. The University of Mississippi proposes to leverage its extensive experience in using acoustic, seismic, and electrical methods for surveying and mapping agricultural soils, monitoring sediment transport in streams, mapping sediment accumulations in reservoirs, and investigating hydraulic structures such as dams and levees in the context of coastal restoration. UMâ€™s choice of seismic and electrical methods is based on the fact that these methods provide orthogonal information. Seismic methods use mechanical energy that returns to the surface after traveling some distance through the ground. The â€œvelocity image mapâ€ can then be used to infer subsurface units/features having sufficient differences in elastic properties that are important, for example, in modelling subsidence of barrier islands. Electrical methods utilize direct currents or low frequency alternating currents to investigate the electrical properties of the subsurface. Most earth materials conduct electricity by the passage of ions in the pore water. Factors that affect the resistivity of soil-water mixtures include ionic concentration, porosity, surface conduction, tortuosity, and connectivity of phases. Therefore,		Yes	No	No	Yes	No	Yes	No		Yes		$ 200,000.00	$ -	
	Research and Education	2168	11/7/2014	Gulf of Mexico Education & Outreach: Training the Next Generation of Environmental Health Managers	In recent years, direct and indirect anthropogenic impacts on Gulf of Mexico, and the Mississippi Sound, coastal ecosystems have reached crisis levels. In addition to the recent oil spill, this region experiences nutrient enrichment and pesticides from agricultural run-off, metals and chemical pollutants from industrial discharge, and a variety of pharmaceuticals and personal care products from community wastewater. These multi-stressors emphasize that as stakeholders and future generations of scientists deal with these increasingly complex environmental issues, they will need training in novel interdisciplinary skills and perspectives that will enable them to tackle these issues in creative ways. Using the GOM as a natural laboratory, we will train graduate students in the varied effects of aquatic stressors using cutting edge technologies from a diversity of scientific disciplines (i.e., Biology, Chemistry, Engineering, Geology, and Pharmacy), and we will apply these lessons to societal implications (e.g., Restoration Management, Law and Policy). The Environmental Toxicology Research Program [ETRP] at the University of Mississippi studies these issues using a variety of techniques including: 1) Biomarker studies [cellular/molecular processes], 2) Environmental Processes [organismal- to community-level organizational effects], 3) Fate & Transport [chemical analyses], 4) Risk Assessment, and 5) Environmental Remediation. We propose to develop an intensive summer â€œboot campâ€ with broad training and multiple perspectives in these core research areas. Participants will receive training and mentorship from ETRP scientists, as well as collaborators in government and private industry laboratories to prepare them to deal with current and future GoM health issues. Specifically, we will recruit interested students (undergraduate, graduate and high school) and stakeholders from Mississippi communities for month long summer sessions divided between the UM Field Station (Oxford MS) and the MS coast. During the first third of the course, students will receive focused lectures and intensive â€œhands-onâ€ training in water quality analyses and biomarker surveys. The team will then drive to the Gulf Coast Research Laboratory where they will learn field monitoring procedures, and habitat remediation/restoration approaches. We plan to recruit 24 students into each of two summer sessions (i.e., June and July) for a total of 48 stakeholders trained each year. However, if funding will only allow a single cohort to be trained, the budget provided represents the aforementioned training for one month and 24 students only. This education and outreach program can stand-alone based on the efforts of the UM ETRP personnel and their collaborators, but we will attempt to leverage outreach opportunities with other funded Restore Projects to provide greater context for trainees. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No	Yes	Yes	Yes	No		No		$ 391,457.00	$ -	
	Research and Education	2169	11/7/2014	Gulf of Mexico Health Assessment: Instrumentation for Environmental Monitoring	Marine coastal communities of the Gulf of Mexico, and the Mississippi Sound, represent important commercial fishery grounds, as well as habitats that support threatened species and provide essential coastal protection and recreation opportunities. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to the GoM have resulted in significant damage and loss of these critical ecosystems and the species they support. Thus, the management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. This requires cutting edge monitoring strategies that focus on measuring the concentrations of contaminants: 1) in local seawater and sediment, and 2) in species tissues. We propose to acquire two incredibly powerful monitoring instruments to enhance the existing University of Mississippi Environmental Toxicology Research Program [ETRP] resources. Specifically, we will upgrade our existing Gas Chromatography/Mass Spectrometer (GC/MS) to address contaminant concentrations in seawater and sediment at resolutions that are approximately an order of magnitude more sensitive than our current instrument. Likewise, we will also upgrade the ETRP Synapt proteomics mass spectrometer workstation to include a MALDI TOF interface to measure contaminants in tissues of affected species. While our current resources enable us to perform the studies proposed in other RESTORE proposals (PI: Slattery), these upgrades will provide state-of-the-art instrumentation for UM ETRP researchers, and will provide Mississippi resource managers access to sophisticated monitoring approaches that focus on the fate and transport of contaminants in the environment, as well as the stress responses of affected species in their entirety (i.e., the proteome). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No	No	Yes	Yes	Yes	100	No		$ 400,000.00	$ -	

	Research and Education	2170	11/7/2014	Monitoring the Health of Coastal Gulf of Mississippi Hard-bottom Communities	Hard-bottom reefs are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent essential habitats for many important fishery species, as well as threatened marine life, and organisms that produce chemical compounds with potential biomedical importance (e.g., gorgonians and sponges). Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM hard-bottom reefs have resulted in significant damage and loss of these critical commercial resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team of marine scientists, environmental toxicologists and natural product researchers proposes to develop an environmental monitoring program to encompass current hard-bottom reefs along the MS coastline. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the hard-bottom reefs through time by evaluating changes in biomass, biodiversity, and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, lipid and chemical constituents). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS hard-bottom reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM Environmental Toxicology Research Program and National Center for Natural Products Research. However, value added mapping and/or tissue analyses options would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 294,392.00	$ -	
	Research and Education	2171	11/7/2014	Monitoring the Health of Coastal Gulf of Mexico Oyster Reefs	Oyster reefs are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent important commercial fishery species as well as biological sinks of anthropogenic contaminants. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM oyster reefs have resulted in significant damage and loss of these critical commercial resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team from UMâ€™s Environmental Toxicology Research Program [ETRP] proposes to develop an environmental monitoring program along the MS coastline to encompass current and planned deployment of oyster reefs. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the oyster reefs through time including changes in biomass and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, and lipid). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS oyster reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM ETRP. However, value added mapping and/or tissue analyses options would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 287,192.00	$ -	
	Research and Education	2172	11/7/2014	Monitoring the Health of Coastal Gulf of Mexico Seagrass Beds	Seagrass beds are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent essential habitats for many important fishery species as well as threatened marine life, biological sinks of nutrients and anthropogenic contaminants, and buffers for coastal erosion and storm surge. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM seagrass communities have resulted in significant damage and loss of these critical resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team of marine scientists and environmental toxicologists from UMâ€™s Environmental Toxicology Research Program [ETRP] proposes to develop an environmental monitoring program along the MS coastline to encompass current and planned purchases of seagrass communities. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the seagrass community through time including changes in biomass and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, lipid, and photosynthetic function). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS seagrass beds, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM ETRP. However, value added mapping and/or tissue analyses options are would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 287,192.00	$ -	
	Research and Education	2173	11/7/2014	Integrated geophysical - geological characterization of Mississippi Sound and tributary estuarine seabed	Background The Mississippi Sound and surrounding estuarine areas comprise a large portion of the State territorial waters in a unique geological, physiographic, and economic setting. Vast urbanized coastal areas adjacent to natural and recreational areas adjacent to very shallow water (0-15m) make seabed characterization very challenging. Traditional marine geophysical methods employing seismoacoustic devices suffer strong absorption from the prevalent coarse sediment seafloor, and/or experience high noise levels from signal bouncing in the shallow water, while nearby land requires integration of offshore/onshore geophysical methods (i.e. Lidar topography/multibeam bathymetry, marine/land resistivity). Project goal The project is designed to employ innovative geophysical/geological methods to characterize the geology and morphology of Mississippi Sound and its important tributary estuaries. Geophysical and geological data integration will facilitate the creation of a multi-attribute geo-model and provide the fundamental baseline for restoration/sustainability activities including marine geo-hazards assessment, ecosystem assessment and restoration, contaminants mapping, marine infrastructures, sediment dynamics, beach nourishment, etc. Project Description MMRI-CMRET-NIUST at the University of Mississippi has a long and varied experience in geophysical and geological exploration of the very shallow coastal zone. We have developed/customized geophysical systems to better image the seabed and the shallow subsurface. Multibeam Bathymetry and Side Scan Sonar are used to image seabed morphology, characterize sediment texture, map sea grass, oyster beds, ship wrecks etc.; multifrequency chirp subbottom and Uniboom Seistec profilers image buried reefs, gas pockets, sediment thickness; marine magnetometer surveys image buried metal objects. Geological methods â€“ vibra-core, gravity core, grab samples - provide sediment ground-truthing; geological and geochemical analysis characterize sediments and possible contaminants. Electrical resistivity profiles can be acquired in conjunction with seismic profiles to better define fluids circulation in the subsurface, i.e. fresh water table position/depth, buried seagrass, gas, tar and additional hydrocarbon pollution. We also have vast experience in processing and interpreting the various datasets that we collect, often devising innovative techniques to suit particular problems and challenges. Relationship to RESTORE goals Characterizing the seafloor and shallow subsurface of Mississippiâ€™s coastline and nearshore is vital to the biologic and economic health of the region and needed in order to evaluate natural and anthropogenic changes to this valuable resource area. This project will identify debris/hazards and damaged areas that need to be addressed in order to ensure personal, recreational, and economic safety in the area. It will inform habitat and ecosystem management and monitoring into the future, and assure that maximum care is taken in coastal health recovery and management. Methods A series of shallow-water cruises would be scheduled to collect geological and geophysical data from the Sound and estuaries. The whole suite of equipment can be operated from a small vessel that	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 125,000.00	$ -	
	Research and Education	2174	11/7/2014	Assessing fish stocks using horizontally scanning sonar	Description: Restoration of the aquatic habitats of rivers draining into the Mississippi Sound, and of the Sound itself, is a goal of significant interest to the people of Mississippi. Improving the quality and quantity of fish stocks can be have a major economic impact on the Gulf region by enhancing both sport and commercial fishing industries. The purpose of this proposal is to provide a low-cost, autonomous device for the acquisition of the data needed by the Mississippi Department of Environmental Quality (MDEQ) and other stakeholders to monitor the physical condition of near-shore and coastal fisheries, thereby providing a metric for assessing the progress and ultimate success of restoration efforts. It is also worth noting that the proposed device may find of special utility both in the initial decision-making process regarding proposed development in or near Essential Fish Habitats and also during and following any permitted development by monitoring fish populations, thus providing a means of ground-truthing predictions of impact with observational data. We are proposing to leverage the considerable expertise acquired at the National Center for Physical Acoustics (NCPA) and the University of Mississippi (UM) during its previous federally funded research and development project on the counting and sizing of catfish stocks in commercial aquaculture ponds (Chambers et al. 2002, 2010; Heffington et al. 2006). Specifically, we propose to adapt two existing high-frequency (420 kHz) horizontally scanning sonar systems that were originally developed to size and count catfish in commercial catfish ponds to perform a similar task in rivers draining into the Mississippi Sound or in the sound itself. A typical catfish pond ranges in size from 0.04 to 7.2 hectares, with the most desirable size being about 4 hectares. Such ponds are typically about 100 meters in length and 1 to 2 meters in depth. The current device can accommodate this and deeper areas of most rivers and of the Sound itself, if desired. The current version of the sonar is capable of 1-cm (0.4-inch) range resolution combined with an approximately 100-meter (109-yard) maximum range. Areas of lesser depth can be sampled by use of higher frequencies, e.g., 1 MHz, although at the cost of reduced range. Use of the system may be divided into two parts, calibration and experimental measurements. The calibration procedure is necessary to correlate acoustic target strength (TS) with the size of fish in the target population. This is described in SRAC Progress Report 23 (2010). Briefly, a seine net is used to collect a sample of fish which are weighed and then allowed to swim back into the river through a PVC pipe. The active element of the sonar scans the region the interior of the pipe, and the returning echoes are recorded. The statistical relationship between target strength and measured fish weight is then determined. During experimental measurements of free-swimming fish, the pipe is removed and the data recorded from each of several hundred pulses (aka â€œpingsâ€). However, an additional step is necessary to adjust each recorded TS for attenuation of the water and spreading of the acoustic wave. This is done by using the total time of flight of the signal to calculate the distance to the fish and applying predetermined corrections factors. The final result will consist of one or more plots of the number of fish vs. size, weight or other desired endpoint. Budget:		Yes	No	No	No	No	Yes	No		No		$ 215,000.00	$ -	

	Research and Education	2176	11/11/2014	An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild shrimp fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild shrimp fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20- year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -	
	Research and Education	2177	11/11/2014	An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild crab fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild crab fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -	
	Research and Education	2178	11/11/2014	An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild oyster fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The oyster fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year) Annual Operation & Maintenance Cost (# years): $ 50,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority area of seafood, specifically the call for â€œeconomic impacts from commercial and recreational fishing along the Gulf watersâ€ listed as one of â€œthe main areas the seafood industry is focused onâ€ GoCoast 2020 Final Report, January, 2013, p. 25). The research will also leverage the scientific inquiries to support, restore and grow the commercial fisheries projects proposed for RESTORE funding by the Gulf Coast Research Laboratory.	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -	
	Research and Education	2179	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program __x__Workforce development _x__ Economic development ____ Eco-Restoration __ __Seafood __x__Other (Name): Tourism Brief description of activities: The tourism industry is known to be a significant component of the economic activity portfolio on the Mississippi Gulf Coast. One unique and significant aspect of the tourism industry in coastal Mississippi is the combination of a coastal environment and casino gaming. With limited resources, it is vital to invest in areas that yield the highest lifetime economic impact and to diversify where possible. However, there is no known comprehensive time-series assessment of the economic impact of tourism activities by sector in coastal Mississippi, nor is there any known collective effort to better understand who visits coastal Mississippi and why. The research project would model the economic impact of tourism activities annually over a ten-year period in coastal Mississippi and, subsequently, on the State of Mississippi. This project would also entail measuring behavioral perceptions and intent throughout this period. Among others, primary sectors in the overarching time series assessment would include casino gaming, beach and marine-related tourism, festivals and other annual events, eco-tourism, arts and museum tourism, sports tourism, and wildlife tourism. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Economic impact analyses will be conducted in the aggregate and by tourism segment to determine the effects on all sectors of the economy to include support amenities such as restaurants and bars, and hotels and lodging. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds?	Harrison	Yes	No	Yes	Yes	Yes	No	No		Yes		$ 15,000,000.00	$ -	

	Research and Education	2180	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: Marine recreational activities are abundant on the Mississippi Gulf Coast, and this â€œblue economyâ€ is widely believed to significantly impact the local and state economies. However, there is no known comprehensive assessment of the economic impact of these coastal activities in Mississippi. Through extensive primary data collection, this research project would model the annual economic impact of coastal marine recreational activities over a ten-year period on both coastal Mississippi and the State of Mississippi. Activities in the annual assessment would include recreational fishing, onshore and offshore charter boating, big game fishing tournaments, recreational boating, and recreational activities on marine and inland waterways. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Annual economic impact analyses will be conducted in the aggregate and by activity segment to determine the effects on all sectors of the economy to include support amenities such as boat sales, bait sales, marine equipment sales, harbor revenue, etc. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $950,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The research project will leverage the RESTORE priority areas of Eco-Restoration, Economic Development, Seafood, and Tourism by measuring recreational monetary outcomes of our coastal natural resources and the blue economy. Specifically, this effort is based on the call for projects that provide â€œa direct impact on residentsâ€™ quality of lifeâ€ which is listed under Additional	Harrison	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 9,500,000.00	$ -	
	Research and Education	2181	11/11/2014	Continuous record of water quality for evaluating restoration impacts (nutrients, trace metals, microbial communities and physical measurements)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. To deal with theses shortfalls, we have been developing and utilizing continuous fluid samplers (OsmoSamplers) for oceanic, estuarine, riverine, and land-based borehole research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing (Jannasch et al., 2004). Such systems have been designed for studies lasting days (samples every 15 minutes) to 5 years (samples every week). Samples also can be preserved in situ to stabilize dissolved metals, nutrients and microbial community structure (Robidart et al., 2013). We propose to deploy new state-of-the-art water quality monitoring systems that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. We move beyond standard nutrient measurements to included trace metals and microbes. Trace metals can be toxic and are mobilized by excretion of salt glands in Spartina alterniflora and contaminated and natural sediments the latter resulting from changes in redox state. Samples also will undergo standard microbial analyses with a particular interest in Ecoli, an indicator species for human health issues. However, the entire biome will be assessed because not much is known about the temporal aspects of microbial structure and function in these environments. We propose to deploy 4 units in representative environments within Mississippi Sound for one year. Each unit will be recovered and redeployed every quarter (daily record) during which a companion deployment of a week in duration will be deployed and recovered (Hourly record). Samples will be analyzed at UM and other universities (e.g. USM). Fabrication, deployment, recovery, and analytical costs are estimated at $380K with university overhead.	Jackson,Harrison	Yes	No	No	No	Yes	Yes	No		No		$ 380,000.00	$ -	
	Research and Education	2182	11/11/2014	Continuous Monitoring of Subsurface Water Quality (Nutrients, Metals, Salinity, Pressure) using Pizometers (Boreholes)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Within marsh environments nutrients and availability of water affect plant zonation as a function of competition, physical stress and nutrient limitation. Therefore, continuous monitoring of these constituents is essential for restoration projects in Mississippi Sound to understand the temporal aspect of water quality before and during restoration projects and to elucidate the effect of tidal forcing on the subsurface environment. For example, temporal monitoring within sandy march and coastal aquifers show a tidal influence on nutrient consumption and microbial productivity within the system (e.g., Sansone et al., 2008). We propose to deploy novel sampling and sensor capabilities in peisometer (boreholes) within and near restoration projects to monitor nutrient, trace metal, salinity, and water level in the subsurface. Such data will provide an indication of water flow, availability of fresh water, the transport and consumption of nutrients, and the mobilization of metals in response to changes in redox state and productivity of microbial communities within sediment. This proposed work goes beyond standard analyses to include trace emtals because mobilization of urban and industrial sources of trace metals (e.g., Fe, Mo, Cu, Cr, Pb, Zn, Cd, and Hg) through natural redox changes can reach concentrations that are detrimental or toxic in tidal creeks, watersheds, and in the subsurface. The novel system that we propose to deploy couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrient and trace metal concentrations. OsmoSamplers are continuous fluid samplers that have been utilized for oceanic, estuarine, riverine, and land-based borehole and piezometer research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing. The slow pump rate and small bore result in plug flow, minimizing dispersion (Jannasch et al., 2004). Such systems have been designed for studies of days (samples every 15 minutes) to 5 years (samples every week) and can be designed to preserve samples in situ for later laboratory-based analysis of dissolved metals. We propose to deploy 4 units in representative environments within Mississippi Sound proposed restoration projects for one year. Each unit will be recovered and redeployed every quarter (daily record) during which a companion deployment of a week in duration will be deployed and recovered (Hourly record). Samples will be analyzed at UM and other universities (e.g. USM). Fabrication, deployment, recovery, and analytical costs are estimated at $280K with university overhead included.	Mobile,Jackson,Harrison	Yes	No	No	No	Yes	Yes	No		No		$ 280,000.00	$ -	
	Research and Education	2183	11/11/2014	RETINA: A K-6 STEM (Science, Technology, Engineering, and Mathematics) Program for Mississippi	Restoration and monitoring projects in Mississippi Sound require STEM (Science, Technology, Engineering, and Mathematics)-trained personnel and a community that appreciates the benefits of a healthy ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of proposed restoration projects. To address these deficiencies and to position Mississippi for the future we need to develop a childâ€™s capacity to develop theory-based learning, which is inherent and can be fostered by promoting curiosity and by exposing them to a spectrum of experiences. Such experiences play a vital role in achieving proficiency in science understanding, but unfortunately, a myriad of budgetary and socioeconomic reasons limits opportunities for youth, leaving many economically disadvantaged students trailing in STEM fields (NRC, 2007). To meet these challenges The RETINA Program provides schools with a cost-effective and administratively beneficial way to broaden the scope of student exposure through its STEM curriculum. The RETINA Program is a 50-minute per day program that lasts 5 days. The Program blends formal classroom instructional activities with hands-on, skill development in a team-based setting conducted by the teacher and guided by national science standards that are set for each grade (e.g., ecology and water quality). There are four different activities per grade that are presented during the first four days. Activities are chosen with the intention of integrating technology under the umbrella of a scientific process and are designed to provide consistency and a continuum of difficulty among the grades. The program focuses on interactive participation in the design and development of simple robotic and sensor systems, providing a range of challenges to engage all students through project-based learning and provide a medium for communicating interest, experience, and challenges on the fifth and final day of the program. The RETINA program has been designed, modified, and tested in several diverse schools in California and Vermont. It is now posed to expand. Because RETINAâ€™s hands-on activities require (1) components that may be prohibitively expensive in todayâ€™s educational fiscal climate, (2) secure storage space, and (3) technology-savvy individuals to maintain systems, the RETINA Program is designed as a traveling program that gives many students access to the same resources. We propose to (1) supply two towed cargo vans with all of the materials necessary for teachers to conduct the educational modules, (2) provide educators with program materials (lesson plan, PowerPoint presentations, homework, instructional videos, and images) and STEM professional development sessions, (3) introduce the RETINA Program within school systems to engage students, and (4) organize a community service organization to provide technical and logistical support to maintain and refurbish modules and to transport cargo vans from school to school. Each van will be loaded with modules to accommodate 5 different classrooms per grade for each of the K-6 grades at a particular school. Given a week-long program, one cargo van can reach ~20 different schools per year (10,000 students). With the two vans proposed herein the cost per student reached per year is <$1, based on an initial cost of $570K (2-yr award). Future costs to maintain and transport systems can be as low as ~$10K for each cargo van per year (<$0.05 per student) and supported by a community organization. Additional vans and professional development can be added to reach each of the 447 elementary schools in Mississippi.	Pearl River,Washington,Hancock,Stone,St Tammany,Mobile,Jackson,Forrest,Perry,Harrison,George	Yes	No	No	No	Yes	Yes	Yes	20	Yes		$ 570,000.00	$ -	STEM Curriculum

	Research and Education	2184	11/11/2014	Marine data collection design competitions for Mississippiâ€™s engineering students	Overview and Motivation: The collection of restoration science data in the Mississippi Gulf Coast will require the development of innovative new sensors and deployment platforms. New sensors are needed to efficiently collect important chemical and biological data to characterize the health of the Mississippi Sound Estuary. In addition to the sensor designs, new, low cost deployment platforms are needed to provide the vehicle to integrate the sensors into efficient data collection systems. Project Goal: Create a yearly design competition among engineering and engineering technology students at all Mississippi universities that will address the needs of the restoration science community and provide critical science data. Project Description: Collecting ecosystem data in a marine environment requires interdisciplinary engineering design to create compact and robust platforms that can be easily deployed and recovered. These data collection platforms must operate in the marine environment of currents, salinity and interference from fishing boats. The design of marine data collection platforms will require students to work as teams with representatives from different engineering disciplines. Based on the requirements developed yearly by the restoration science community, students at Mississippi universities will research and design solutions for new data collection platforms. These designs will be judged by a committee from the university and restoration science community and a prototype of the winning design from each university will be built. The prototypes will be judged and the winning design will be built and deployed to collect the needed data. The Mississippi Mineral Resources Institute (MMRI) at the University of Mississippi has a long history of designing, building, deploying and recovering marine data collection platforms. We will use this expertise and the resources of the MMRI Marine Technology shop to build multiple copies of the winning design, deploy and recover them in the Mississippi Gulf Coast. Budget and Timeline Each team would be supplied with a budget of $1500 per year for materials and supplies. The cost of working prototypes, with all instruments, would be dependent on the cost of required instruments and is estimated to be $150,000 per year. The cost to build, deploy and recover the final winning design is estimated at $250,000 per year, including instruments, for a yearly cost of approximately $425,000.	Hancock,St Tammany,Mobile ,Jackson,Pearl River,Orleans,Harrison	Yes	No	No	No	No	Yes	No		No		$ 425,000.00	$ -	
	Research and Education	2185	11/11/2014	SS-ROV Summer Camp -Take the Plunge into a Week-long Day Camp for 6th-8th Grade Students	Restoration and monitoring programs in Mississippi require STEM (Science, Technology, Engineering, and Mathematics) -trained personnel and an enlightened, educated community that is cognizant of the need for a healthy coastal ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of such proposed programs. Middle school students, in particular, are at the crossroad between a future in a STEM career and one that typically lacks scientific and environmental influences. To engage this demographic, we have developed the SS-ROV (Seafloor Science and Remotely Operated Vehicle) summer camp, which is a unique STEM-oriented summer program offered to students entering grades 6th to 8th. We propose to offer the SSROV Summer Camp throughout the state of Mississippi, but in particular, for this call, in southern Mississippi. SSROV Summer Camp is a week-long day camp that has an overarching theme that mimics activities aboard an oceanic research vessel. The science program is based on exploration and exposing students to test new ideas and concepts in a stimulating, confidence building atmosphere. Within this scientific theme students are engaged in challenging project-based and team-oriented problem solving activities. These activities represent functional technologies that are needed to achieve successful real-life missions and lead to the students creating innovated missions that the students devise. During the camp, students are challenged to effectively communicate, create, and solve problems while completing practical projects and preforming real-world tasks. Worksheets, schematics and instruction guide students toward success and understanding in technical and scientific activities such as: -Scientific method -Seafloor Exploration techniques -Electronic circuits and components -Underwater robotics -Marine ecology -Quantifying ecosystem composition -Automated benthic rovers -Sensor calibration and data interpretation -Group communication and collaboration -Role playing and responsibilities SSROV Summer Camp was initiated in Oxford, MS in 2014. The program will be offered in for one week in each of four Mississippi towns in 2015 (Oxford, Tupelo, Holly Springs, and Southaven) though the support of C-DEBI, and National Science Foundation (NSF) -funded Science and Technology Center. We propose to expand the program to dozens of other towns in southern Mississippi and to provide more than one week at a given venue. A team of educators (one instructor and 3 interns) can oversee 6 camps per summer with 28 students per camp (total of 168 students). Because of the technical nature of the camp an introductory week is necessary. We also reserve an extra week for the interns (early college or graduating high school seniors) to develop/critique/improve an activity,	Hancock,Stone,St Tammany,Jackson,Pearl River,Forrest,Perry,Washington,Harrison,George	Yes	No	No	No	No	Yes	No		Yes		$ 40,000.00	$ -	STEM Curriculum
	Research and Education	2187	11/11/2014	A Hands-on Ecology-based STEM (Science, Technology, Engineering, and Mathematics) Activity for 4th Grade Students	Restoration and monitoring systems in Mississippi require STEM (Science, Technology, Engineering, and Mathematics) -trained personnel and an enlightened, educated community that is aware of the benefits of these actions for the future health of the Mississippi Sound and for maintaining or improving all of the activities and benefits that mankind has expected from the Mississippi Sound. One of the best ways to reach a community is by providing an exciting and stimulating hand-on activity to student that relay this excitement to their parents. Given the breadth of potential science and engineering topics that excite children, we propose to focus on interactive participation in the design and development of simple robotic systems through team-based and project-based learning. Thus, young students experience discovery through technology in a collaborative atmosphere. We propose to extend an educational/outreach program that is currently operating in northern Mississippi to Southern Mississippi and to the entire state. The program introduces fourth grade students to the ecology of seafloor organisms (satisfying national science standards) and a mechanism to study these organisms using underwater remotely-operated vehicles (ROV). The Program begins with an introductory assembly-style presentation to all of the 4th grade students at a particular school. This presentation introduces seafloor organisms, ecology, healthy ecosystems, and the functionality of ROVs while exposing students to potential careers. Then one class at a time is introduced to parts, motors, and switches to build a simple, but functional ROV. Student teams then test the operational capabilities of their ROV and modify their ROV to complete a specified task or to get a desired outcome. The hands-on, interdisciplinary, and applied science nature of this program sets the stage for fun and rewarding learning opportunity and provides a real-world framework for understanding ecology and technologies that are active in the Gulf of Mexico. When students are finished with the ROV activity, they are given a sticker and homework (that can be completed in class) to provide a foundation for discussing the activity with siblings and parents. We propose to expand this program to reach many of Mississippiâ€™s 447 elementary schools. We request $95K for salaries, supplies, and travel (gas/lodging) to reach 80 individual schools (~8,000 fourth grade students) with the help of volunteers and unpaid student interns.	Hancock,Stone,St Tammany,Mobile ,Jackson,Pearl River,Forrest,Perry,Washington,Harrison,George,Hancock,Stone,St Tammany,Mobile ,Jackson,Pearl River,Forrest,Perry,Harrison,George	Yes	No	No	No	No	Yes	No		Yes		$ 95,000.00	$ -	STEM Curriculum
	Research and Education	2188	11/11/2014	Sub-bottom profile, sediment characteristics, and mapping of the shallow (<3m) water portion of Mississippi Sound aided though the use of autonomous surface boats	Critical to all four of the proposals that will be submitted by Mississippi to RESTORE is the need to know the water depth (bathymetry) and subsurface composition in Mississippi Sound (e.g., mud, sand, hard substrate). More than half of Mississippi Sound is <3m deep, restricting navigation to small, low draft vessels and severely limiting the swath width of multi-beam sonars that are typically used to map the seafloor. Even shallower are the many sites that harbor eel-grass, submerged aquatic plants, and future sites for restoration projects. While airplane-based LiDAR has been used to map shallow coastal zones, this technology is limited when waters are not clear, is expensive to conduct, and does not provide a context for subsurface type and structure. We propose a solution to this problem that affords an expansive mapping program for these shallow water areas with the resolution necessary to track temporal changes in seafloor relief and to discern substrate structure and type. To compete such operations we propose to use a fleet of autonomous instrumented (e.g., single beam sonar, navigation and communication hardware) surface boats (kayaks) that is responsive to a manned boat (e.g., Boston Whaler) with a multi-beam system and a sub-bottom chirp sonar. This automation exists (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and has been expanded upon for gradient following (e.g., Adamek et al., 2013). Multi-robot systems offer many advantages over a single system, including redundancy, coverage and flexibility. One of the key technical considerations is coordinating individual units. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation using the cluster space control technique. These ASVs are monitored by a centralized controller, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust spacing based on visual cues and bathymetric data that are relayed from the ASVs. Thus, our cluster space control approach allows one to get the best quality data in an unknown/varying seafloor terrain. Furthermore, the manned presence provides a measure of quality control for the multi-beam system and chirp sub-bottom sonar on the command vessel. We propose to fabricate 8 autonomous systems boats that will respond to a master computer on a command ship. Specifically we will use a Boston Whaler with pole mounted multi-beam and sub-bottom profiler sonars to tow the fleet of ASVs to the sites of interest. There the ASVs will be initiated and follow in formation behind the command boat. We will use Mokai â€œjet-poweredâ€kayaks at a speed of 10 knots (they can run 20 knots for 8-10 hours) and lease a Boston Whaler for the command vessel. With side-by-side ASV operation with 10 meter spacing and at 10 knots, we will be able to cover 1.5 km2/hr or 14 km2/day (3,300 acres). This will provide a bathymetric map with centimeter resolution, characterize sediment type, and provide an indication of subsurface stratigraphy. Each kayak will cost ~$19K to purchase, instrument, and integrate with the aid of a graduate student, engineering technical support, and a small operational team. These kayaks will be integrated into the command structure during Year 1. For Year 2 we propose 20 days of operation in Mississippi Sound to cover (~75,000 acres or 117 square miles). The total cost of the preparing the vehicles in Year 1 and operating them in the field for 20 days in Year 2 is $650K, but will provide 117 square miles of data in a GIS format that can be revisited yearly at a much reduced cost to monitor changes in bedform to establish depositional and erosional rates within Mississippi Sound. Kitts, Christopher A., and Ignacio Mas. "Cluster space specification and control of mobile multirobot systems." Mechatronics, IEEE/ASME Transactions on 14.2 (2009): 207-218.	Jackson,Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	20	No		$ 650,000.00	$ -	Equipment development and purchase
	Research and Education	2189	11/12/2014	Development of a Statewide Engineering Innovation Program for Marine Science Applications in Support of Mississippi Sound Restoration Projects	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€. However, the number of trained engineers from institutions of higher learning that have a understanding of the challenges associated with working within the marine sector are insufficient and donâ€™t meet community needs. For example, remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). We propose to make an investment in the education of engineers at the college level within the state of Mississippi, by exposing students to challenging engineering applications in the marine world, thereby opening the door to a plethora of potential careers. To accomplish this feat we will team up with Dr. Chris Kitts, Associate Dean of Research and Faculty Development, School of Engineering, Santa Clara University, who is funding by the Kern Family Foundation to develop a multi-institutional, cooperative, engineering program in which teams of students engineers and mentors design and fabricate instruments, platforms, and/or sensors. These products are integrated among the various university-based teams to complete a specified task that accomplishes a scientific goal. This successful and long-standing program incorporates a dozen universities in the Midwest, where the Kern Family Foundation wants to make a difference. Building upon this successful program, we propose to a similar program within the state of Mississippi to integrate each of the schools of higher learning with an engineering program. The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for different sensors, vehicles, or platforms that will be developed at each of the participating universities. Student teams will design, fabricate and test their system in context of design criteria. This work will culminate with the teams meeting at the Gulf Coast Research Laboratory in Ocean Springs, MS. Each team will then participate in the mission to collect data for restoration projects. The cost for this program is $160K per year with half of the funds being spent on materials/travel/sensors for engineering teams and the remainder for coordination and science outcomes. Potential Year 1 projects could include, for example, the development of autonomous surface vessels for water collection, preservation, and sensing â€“ the initial project will depend on the amount of money available and current restoration projects.	Hancock,Jackson	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 160,000.00	$ -	Curriculum development

	Research and Education	2190	11/12/2014	Purchase and Sea Trials of a 4000-m Capable Remotely Operated Vehicle for Marine Science Discovery and Experimentation	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€ An example of the growth in the marine sector is the expectation that remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). However, no deep-water ROV systems for marine science are based in the state of Mississippi or in any of the five states that border the Gulf of Mexico. We propose to make an investment in the infrastructure of Mississippi Marine Technologies though the purchase and sea trials of a 4000-m capable remotely operated vehicle (ROV). The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for an ROV that will be suitable for scientific operations within the Gulf. Upon delivery of the ROV, the NIUST team will subject the ROV to sea trials and design and fabricate the various tools that will be needed for scientific discovery and experimentation. The cost for such a vehicle would include a tether, winch, and tether management system, control van, and supply van. The vehicle would have 2 seven-function manipulators. The cost for this the design, purchase, and sea trials is ~$5M and would take 3-4 years to complete the final integration of systems for ocean operations.		Yes	Yes	No	No	Yes	Yes	Yes	100	Yes		$ 5,000,000.00	$ -	Equipment development and purchase
	Research and Education	2200	11/13/2014	Integration of Earth Observations with Computational Modeling to Improve Estuary Water Quality Monitoring in the Mississippi Sound Estuary	Project Goal: To integrate water quality parameters derived from remote sensing with hydrodynamic water quality models to improve the monitoring and assessment of Mississippi Sound estuary. Overview and Motivation: The Gulf of Mexico has received a tremendous of amount of attention lately from government, private industry and the general public. As a result of the Deepwater Horizon oil release, a great deal of attention has been given to restoration of the Gulf of Mexico and as a result of Congressional action, the RESTORE Act was passed. During the Status of Gulf of Mexico conference organized by the Harte Research Institute at Texas A&M University at Corpus Christi, a large number of speakers spoke of the need for science data to monitor restoration projects and to evaluate the potential for success of selected restoration projects. The linkage of remote sensing with hydrodynamic modeling can provide that needed monitoring. Estuaries represent an important component of the complex and dynamic coastal watersheds. They are usually characterized by abrupt chemical gradients and complex dynamics, which can result in major transformations in the amount, chemical nature and timing of the flux of material along these riverâ€“sea transition zones. The ecological functioning of these areas is considered to be of major concern, as estuaries offer the last opportunity to manage water quality problems before they become uncontrollable in the coastal waters. Numerical models are capable of providing hydrodynamically computed water quality data to study estuaries, however, it is difficult to set initialization and boundary conditions and to calibrate and validate the models. Remote sensing data can provide surface observations, but these data are limited by proximity to shore, cloud coverage, and variable spatial and temporal resolution. Mapping and monitoring water quality with remote sensing is also limited to the surface and near surface conditions, with little or no information at depth. Numerical models have the ability to predict, in three-dimensions, the changes in water quality parameters over time, providing coastal management agencies with information needed to evaluate restoration projects for effectiveness. Satellite remote sensing provides a synoptic and multi-temporal view of water quality at different resolutions, spatial, temporal, and spectral. Satellite remote sensing commonly used for water quality parameters includes MODIS, VIIRS and Landsat. With their daily temporal resolution and good spectral bands for water quality, MODIS and VIIRS are ideal for monitoring and mapping water quality on a frequent basis. The Landsat series of systems has higher 30 meter spatial resolution, but is limited in its temporal resolution to a 16 day repeat cycle. With the frequent cloud concerns in a coastal environment, temporal frequency is important. While both techniques have weaknesses, when integrated they are a powerful tool to study water quality in estuarine environments. The integration of these techniques was developed and demonstrated through a recent application to study water quality problems in Lake Pontchartrain during Bonnet CarrÃ© Spillway opening in 1997 (Hossain et al., 2014; Chao et al., 2013, Chao et al., 2012). In that study, the integration of remote sensing data with the CCHE3D numerical water quality model was used to map and monitor suspended sediment concentrations, chlorophyll-a concentration and salinity in the lake water at high spatial and temporal resolution. Satellite imagery derived water quality data were used to initialize, calibrate and validate the numerical model. Project Description:	Hancock,Mobile,Jackson,Harrison	Yes	No	No	No	No	Yes	No		No		$ 750,000.00	$ -	
	Research and Education	2201	11/13/2014	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems Project Overview and Rationale Testing and validating new environmental monitoring technologies to enable long-term land use planning, management, and sustainability of coastal resources is a foundational precept of community resilience through ecosystem preservation and restoration. Protecting these coastal resources which provide critical ecological services to the communities along the Mississippi Gulf Coast in terms of buffers against storm surge and sea level rise requires long-term dependable, detailed, and proven information to make decisions that affect restoration and preservation outcomes. The National Oceans and Applications Research Center (NOARC) is focused on developing, testing, and validating the commercial applications of environmental monitoring technologies and the information they provide to address Mississippi restoration objectives while enhancing the long-term economic sustainability of this expanding geospatial information industry on the Mississippi Gulf Coast. Expansion and sustainability of this industry and its long term benefit to ecosystem restoration is currently inhibited by inconsistent means to calibrate and validate the basic data sets that underpin the derived resource management information. Scientific sampling designs to determine ecosystem restoration trends and quantified geospatial frameworks to make informed restoration investment decisions are critically dependent on calibrated and quantified data sets of known positional, spatial, spectral, and radiometric resolution. Replicable, calibrated data is the fundamental requirement for measuring spatial and temporal trends in coastal ecosystems that address long-term adaptive management alternatives. This proposal addresses the fundamental requirement for quantified data and geospatial information products by Federal, State, NGO, and private organizations focused on wetland restoration and sustainability. In addition, the long-term viability of this growing environmental monitoring service industry on the Mississippi Gulf Coast is also dependent on proven, demonstrable data and information product performance. The NOARC team will provide a comprehensive test range comprised of calibrated and instrumented target sites as well as highly instrumented and surveyed ecosystem reserves to Mississippi companies and universities to validate data products and derived geospatial information. The Mississippi Proving Ground will provide a unique, competitive edge to our companies and universities as they fully demonstrate and prove new monitoring technologies and information products to broader national and international markets. â€¦ Opportunity The market is currently exploding in low cost environmental monitoring technologies including commercial small satellites, unmanned air vehicles (UAVs), and autonomous maritime vehicles operating on and below the surface. To reduce vehicle cost, weight and power requirements, these platforms typically omit on-board calibration equipment. Therefore, the only way environmental data streams from these platforms can be validated and calibrated is through well characterized, calibrated, and instrumented ground-based test ranges. This proposal addresses this requirement by providing the means for Mississippi companies to enter the market with proven and tested information products and platforms. At the same time a well characterized, instrumented test range is aligned with RESTORE objectives focused on sustainable wetlands and resilient communities. The natural ecosystem component of this range will be used as the reference condition for conducting trend analyses on wetlands undergoing restoration and to aid in reporting long-term outcomes of restoration. In addition, the natural ecosystem test sites will be used to develop quantified sampling and monitoring techniques to determine long-term health and condition of wetland habitats including changes in areal extent, species composition, and competing land uses.	Hancock,Jackson	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 2,500,000.00	$ -	
	Research and Education	3209	11/14/2014	Oyster Reef Mapping and Habitat Monitoring â€“ Suggestions to Improve Commercial Yield	Oyster Reef Mapping and Habitat Monitoring â€“ Suggestions to Improve Commercial Yield Dr. Arne Diercks (USM), Dr. Ian Church (USM) and Dr. Craig Hickey (UM) Coastal habitats provide ecological, cultural, and economic value. They act as critical habitat for thousands of species, including numerous threatened and endangered species, by providing shelter, spawning grounds, and food. Oysters, a commercially harvested food source in the Mississippi Sound, are subject to many natural and man-made impacts, including storms moving sand onto the reef and barge traffic running across the reefs. While scouring by surface vessels will damage the reef structure, toxic runoff advected over the reef can cause damage to the biota living within the reef damaging or even destroying the natural ecosystem that allows these reefs to flourish and grow producing the seafood coveted by many. It is costly, time consuming and labor intensive to estimate health and shape of a single reef using conventional methods of spot sampling using small boats and oyster tongs of oyster shells on the seafloor. We propose to map one oyster reef that previously showed signs of damage, using a multibeam echo sounder, a sub bottom profiler and a side scan sonar to establish the extent of the reef and the sub bottom structure below and around the reef, to guide future culching projects. Since Oyster growth is slow, we will collect monthly passive and active acoustic time series measurements at this reef as well as at an alternate reef that is established as being healthy. Acoustic signatures of both reefs will be compared to evaluate the health status of the damaged reef. In case of natural or man-made disasters we will collect additional data to properly document the effects of these events to the reef. We propose that new culching efforts are to be directed to areas identified by sub bottom structure analyses to be likely to sustain a positive relief after culching thus providing the hard ground necessary for young oysters to grow on. An additional spatial multibeam survey of the newly culched area after will be used to evaluate the distribution of the applied dead oyster shells on the seafloor. This high resolution bathymetry data will provide spatial coverage and thickness of this material on the seafloor by subtracting pre from post culch bathymetry, with the difference in the data showing the added oyster shells. While we recommend complete coverage of MS Oyster Reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a combined USM and UM field collection team, as well as the laboratory efforts of the USM and UM team. However, value added toxicology analyses options are also available (see Restore Project headed by Slattery, UM). Deliverables: Year 1: Base map of oyster reef extends, based on high resolution multibeam seafloor data, side scan and sub bottom data. Suggestions for future culching sites based on these data to improve efforts of reef maintenance and expansion. Pre and post culching MBES and SSS maps over new culch sites Collect and disseminate passive acoustic data to gauge reef health Year 2 and 3: Continued monthly monitoring of reef using passive and active acoustics to measure changes in reef shape, growth and health, based on acoustic backscatter data and passive noise changes in the reef. For the passive data, the general idea is that more high pitch noise will indicate a more active and healthy reef do to a higher activity of benthic organisms in the reef making more sound.	Hancock,St Tammany,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,360,324.00	$ -	
	Research and Education	3210	11/14/2014	Seagrass Habitat Characterization Using Acoustic and Sedimentological Techniques	Seagrass Habitat Characterization Using Acoustic and Sedimentological Techniques. Dr. Arne-R. Diercks (USM), Dr. Craig Hickey (UM), Dr. Charles Church (UM), Dr. Ian Church (USM); Dr. Davin Wallace (USM) Coastal habitats provide ecological, cultural, and economic value. Seagrass beds within these coastal areas, provide essential habitats for a wide variety of aquatic species and buffer subaqueous sediments from erosion (Green and Short, 2003). As with many barrier islands along the Atlantic and Gulf coasts, seagrasses are found in the lee of the islands, protected from open oceanic conditions. Since the early 1970â€™s drastic losses of seagrasses have occurred throughout the Gulf of Mexico (Dennison et al., 1993). Seagrass communities are exposed to a variety of environmental pressures, ranging from reduction in water clarity, alteration of sediment migration via dredging, direct destruction from boating and commercial fishing and manmade and natural disasters affecting the natural setting of the seagrass habitat (Orth et al., 2006). Time series mapping of seagrass beds at high spatial and long temporal resolution is important for distinguishing the effects of major disturbances from natural variation in seagrass coverage (Dekker, et al., 2005). Methodological differences (e.g., mapping potential seagrass habitat rather than existing seagrass beds) are important in explaining the dramatic decline in seagrass coverage that is apparent when recent data are compared with results of earlier surveys. Seagrass beds are important not only in terms of the plant biomass produced (much of which provides food for bacteria and microscopic organisms) but also as feeding habitats for both juvenile and adult fishes. The major prey categories for omnivorous and carnivorous fishes from seagrass habitats are crustaceans (Hindell et al., 2000). Restoration of Seagrass beds can be achieved by encouraging natural recolonization in areas that have experienced improvements in surface water quality, replanting of rhizomes and over-seeding of bottom areas conducive to growth of seagrass based on their location, sediment properties and environmental conditions. We are proposing to acoustically characterize an existing SeaGrass bed to establish the acoustic signature of the sediment environment that allow growth of seagrass beds. We will support the acoustic work with sediment cores collected in the same areas to calibrate the acoustic data and to get an understanding of the sediment sub bottom structure. Using the acoustic signature plus sediment coring, we propose to distinguish differences that have occurred in the sediment structure of seagrass fields that have disappeared and to investigate potential suitable areas as future seagrass bed sites for coastline restoration. Seagrass beds are an important ecological system that sustain larval fish and crustacean development providing the future for commercial and recreational fisheries in the MS waters. Located at strategic sites, they can slow down sediment transport within the sound, and provide a filtration function, thus stabilizing barrier islands and improving water quality. While we recommend complete coverage of all MS SeaGrass habitats, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the MS Sound. Thus the budget provided represents the aforementioned sampling regime for two sites, 1) a currently existing Seagrass Bed and 2) a known site from which seagrass has vanished. This project can stand-alone based on the efforts of a combined USM and UM field collection team, as well as laboratory efforts of the USM and UM team. However, value added toxicology analyses options are available (see RESTORE Project headed by Wallace, USM and Slattery UM). Deliverables: Year 1: Base map of seagrass extends at one of the existing sites in the MS Sound, based on seafloor data, side scan and sub bottom data. We will produce an acoustic and sedimentological site characterization of an existing seagrass bed which will include side scan, sub bottom and sediment composition data of this site. Sediment push cores will be analyzed for grain physical sediment properties like grain size distribution, porosity, POC content. We will investigate a historic seagrass bed near ship island with the same methods as above to see how hurricanes have impacted that site and what changes have occurred in the environment. Based on sedimentology of the existing healthy seagrass bed we will provide guides to the USACE and DMR to produce proper sediment	Hancock,St Tammany,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,480,192.00	$ -	

	Research and Education	3211	9/1/2015	Project Explore: Students Exploring Their Local Environment	Project Explore is a Pathways project with the goal of interesting students in grades 5-8 in science, technology, education and mathematics (STEM) fields through out-of-school experiences related to the impacts of the 2010 Deepwater Horizon (DwH) oil spill and the ensuing restoration efforts. Our objective is to develop and implement a model that accomplishes this goal through after-school/Saturday activities coupled with a two-week non-residential summer camp relating to natural disasters and ensuing restoration that impact studentsâ€™ local communities. This model will be implemented in a state with very limited informal science opportunities. Each year, 30 students (60 total) in grades 5-8 will be targeted to learn science relating to their local environment in an informal setting. Students will be exposed to a variety of STEM areas and careers through interaction with researchers and educators involved in the DwH restoration efforts. Proposed topics rely heavily on science, but the other areas of STEM are represented in the restoration efforts and will be part of the proposed program. Disciplines represented by Project Explore include life and earth sciences, in addition to foundational concepts in science, engineering and technology, which are derived from mathematics. Students are also exposed to a variety of technologies used by scientists and engineers to address environmental issues. Through their discovery of the impact of a major disaster like the DwH oil spill on their community, students will become better enabled to think globally.	Hancock,Stone,Jackson,Pearl River,Harrison,George	Yes	No	No	No	No	Yes	No		No		$ 150,000.00	$ -	
	Research and Education	3213	11/14/2014	University and College Volunteers for Restoration Projects	Community Collaborations International will deploy teams of university and college volunteers from around the country to participate in a week of service devoted to giving a boost of youthful energy to community based organizations supporting children, families, and the environment on the Gulf Coast. Community Collaborations International began working in the Gulf Coast ten years ago recruiting and organizing teams of college volunteers to assist with Hurricane Katrina recovery efforts. Since then, we have returned every year building relationships and a continuum of sustained impact in the region. Volunteer teams will coordinate their efforts with organizations such as the South Mississippi Land Trust, Audubon Society, Horticulture for Humanity, Gautier Parks and Recreation Department, Mississippi Department of Marine Resources, Boys and Girls Clubs of the Gulf Coast, Gulf Islands National Seashore, Renew our Rivers, and many more. Based on prior year results, we expect 30 universities and colleges to participate resulting in between 400 and 600 volunteers primarily during the month of March. 400 volunteers each committing to a full week of service results in over 12,000 hours of much needed support for community organizations! These students have made a commitment to spend their spring break week focused on meeting the needs of Gulf Coast communitiesâ€¦they work hard and get the job done.	Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes		Yes		$ 410,000.00	$ 360,000.00	
	Research and Education	3214	11/14/2014	St. Louis Bay and Tributaries, MS Comprehensive Restoration Program: Phase I	The Deepwater Horizon oil spill caused direct and significant harm to Mississippiâ€™s St. Louis Bay and the Mississippi Sound. St. Louis Bay and its tributaries offer an ideal ecosystem for a water quality and quantity restoration program to demonstrate a comprehensive, integrated approach to holistic restoration which could be transferrable Gulf-wide. Water quality assessments and monitoring provide a foundation for programmatic, science-based decision-making to coordinate, expand and integrate many ad hoc projects proposed by local stakeholders, or from various comprehensive plans. This effort will aggressively identify, engage and include local governmental, non-governmental and private stakeholders in a transparent process to identify, prioritize, permit and implement priority water quality and quantity projects while building new partnerships to leverage technical and financial resources during implementation and for long-term operation and maintenance. This program proposes a new collaboration between Mississippi State University (MSU), the U.S. Department of Agricultureâ€™s Natural Resources Conservation Service (NRCS), Jackson State University (JSU) and the Pickering Firm, Inc. (PFI) to address the Gulf Councils water quality and water resources goals and objectives. MSU and PFI have a longstanding Memorandum of Understanding which has been used repeatedly on complex projects that integrate research and implementation. The Gulf Councilâ€™s five restoration goals are; 1) coastal, estuarine and marine habitats, 2) fresh, estuarine and marine water quality, 3) living coastal and marine resources, 4) enhance community resilience and 5) a restored and revitalized Gulf economy. Seven objectives support these goals; 1) restore, enhance and protect habitats, 2) restore, enhance and protect water resources, 3) protect and restore living coastal and marine resources, 4) restore and enhance natural processes and shorelines, 5) promote community resilience, 6) promote natural resource stewardship and environmental education, and 7) improve science-based decision-making. JSU, PFI, and NRCS provide MSU with the depth and breadth of technical and professional expertise to support this program. The programâ€™s geographic location and size encompassing the St. Louis Bay and tributaries was selected to meet the Councilâ€™s four priority criteria. Specifically, this holistic approach is easily scalable to address all the Councilâ€™s goals and objectives and transferable to be replicated throughout the Gulf region and; ƒ¾Will significantly and measurably contribute to restoring and protecting the Gulf Coast Regionâ€™s natural resources, ecosystems, fisheries, marine and wildlife by concentrating and coordinating individual projects; ƒ¾Is large enough to substantially contribute to restoring and protecting the Gulf Coast ecosystemâ€™s natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands yet small enough quantity specific improvements; ƒ¾Covers the St. Louis Bay and tributaries which Mississippiâ€™s GoCoast 2020 (2013) identified as a Coastal Bay and River Delta project site and also integrate and coordinate myriad projects from other federal or Mississippi agency plans; and ƒ¾Provides a forum for local government and stakeholder participation and a mechanism to leverage their resources to restore the long-term resiliency of an area and resources physically impacted by the Deepwater Horizon oil spill (e.g., providing up-front cost share and long-term operation and maintenance for specific projects). MSU would implement and manage this program in partnership with JSU, NRCS and PFI. This approach ensures the application of science-based decision-making, strong community engagement and	Hancock,Stone,Pearl River,Forrest,Harrison	Yes	Yes	No	Yes	No	Yes	Yes	20	Yes		$ 14,968,000.00	$ -	
	Research and Education	3216	11/14/2014	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the Mississippi Sound	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the Mississippi Sound A proposed component in Mississippiâ€™s Strategy for RESTORE Bucket 2, Proposal #2: Creation of a Mississippi Sound Estuarine Program (MSEP) Summary: In the aftermath of BP Deepwater Horizon Oil Spill, larger numbers of bottlenose dolphins and sea turtles have stranded in the northern Gulf of Mexico, and many of these strandings have occurred along the coast of the Mississippi Sound. The proposed project will promote the restoration and recovery of dolphin and sea turtle populations in Mississippi waters through a systematic approach of 1) responding to dolphin and sea turtle strandings; 2) rehabilitating sick and injured dolphins and sea turtles; and 3) monitoring the recovery of wild dolphin and sea turtle populations. Representing apex predators, dolphins and sea turtles are ideal bioindicators of ecosystem health. This project will facilitate understanding of how these species have endured numerous environmental stressors in the northern Gulf of Mexico and foster their future survival in the Mississippi Sound. Participants: 1) Mississippi State University College of Veterinary Medicine (MSU-CVM). The College of Veterinary Medicine operates aquatic animal health diagnostic laboratories at the Delta Research and Extension Center in Stoneville, MS, and at the MSU main campus in Starkville, MS. These diagnostic laboratories serve as regional resources primarily for freshwater fish diagnostics for the Mississippi Delta and East Mississippi; they also conduct freshwater and marine aquatic animal diagnostic analyses on cases from other states. MSU-CVM has aquatic animal health scientists in pathology, bacteriology, virology, parasitology, toxicology, immunology, and pharmacology. 2) The Coastal Research and Extension Center (CREC) (Biloxi, MS). CREC has had a close affiliation with coastal and marine issues since its origination in the early 1970â€™s. The original mission of recreation and tourism associated with the Sea-Grant Advisory Service slowly expanded to include a Coastal Aquaculture Unit focusing on aquaculture suited to the coastal area. Shortly thereafter, the Experimental Seafood Processing Laboratory was created through a cooperative agreement with NOAA. 3) The Institute for Marine Mammal Studies (IMMS) (Gulfport, MS). Since 1984, IMMS has been a leader in marine conservation research and outreach regarding endangered, threatened, and protected marine species in the northern Gulf of Mexico. IMMS played a central role in the response and rescue of these species in the aftermath of the Deepwater Horizon oil spill. In the aftermath of the oil spill, the IMMS responded to and evaluated over 150 dead dolphins and nearly 600 stranded sea turtles, representing approximately 50% of all the dead turtles observed during the spill response. Plan: Systematic surveys of Mississippi Soundâ€™s mainland beaches and barrier islands will be conducted to more effective response to stranded marine mammals and sea turtles. Locality and morphometric data along with tissue samples will be collected for health assessments. Additionally, strandings data will be analyzed to identify demographic, seasonal, and annual trends. Live stranded marine mammals and sea turtles will be transported back to IMMS facilities for rehabilitation. These animals will be given a full veterinary exam, and a health plan will be developed for each animal. Recovery of wild dolphin and sea turtle populations will be monitored by transect surveys, photo identification surveys, satellite tracking, and sampling of wild sea turtle populations in the Mississippi Sound. Coordinating Partners: MSU-CVM is one of five colleges of veterinary medicine in Gulf Coast states (Texas A&M University, Louisiana State University, MSU, Auburn University, and University of Florida). There is potential for linkage with these CVMs for a comprehensive GOM aquatic animal health network. IMMS is part of the National Stranding Network. Sustainability: The proposed program will result in long-term establishment of MSU-CVM aquatic animal health diagnostics and research located at CREC with cooperative veterinary and rehabilitation facilities at IMMS. This cooperation will be modeled after the successful MSU-CVM fish health diagnostics and research program at DREC. Community engagement through education and outreach	Harrison	Yes	No	No	No	No	Yes	No		No		$ 16,520,879.00	$ -	
	Research and Education	3220	11/14/2014	Development of a Gulf of Mexico-wide marsh bird conservation cooperative	Natural resource management and regulatory agencies lacked systematic species-specific distribution or abundance data which could be used to evaluate the effects of the Deepwater Horizon Oil Spill. Marsh birds were an integral part of the Natural Resource Damage Assessment primarily because are excellent indicators of the health of Gulf Coast tidal marsh ecosystems along the Gulf of Mexico. Unfortunately, because of the limited scope of previous marsh bird monitoring and research, extrapolation of these existing data to differing geographic areas and marsh types found across the Gulf of Mexico was extremely limited. Fortunately, a regional monitoring and research framework has already been developed for marsh birds but has yet to be implemented along the Gulf of Mexico. Thus, the fundamental goal of this project is to â€œmaximize the usefulness of marsh bird monitoring data to inform and facilitate conservation and restoration efforts along the Gulf of Mexicoâ€	Hancock,St Tammany,Mobile,Jackson,Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 12,500,000.00	$ 50,000.00	
	Research and Education	3221	11/14/2014	Application of Chemical, Sensory, and Microbial Measurements/Approaches to Determine the Restoration of Marine Fisheries and Environmental Quality in Mississippi Gulf Coast after the BP Oil Spill and Dispersants	The purpose of this proposal is to determine the effects of oil spill and/or dispersants on the quality (chemical, sensory characteristics, and microbial) of representative species of finfish (mullet) and shellfish (oysters, shrimps, and blue crab), and also on environment (seawater and sediments) in Mississippi Gulf Coast. Samples will be collected from different areas that have been exposed to oil and different areas that have not been exposed to oil along the Gulf Coast of Mississippi (in four different seasons; this will need to be repeated 5 times (in 5 different years to get accurate data). Polycyclic Aromatic Hydrocarbon (Acenaphthene, anthracene, flouranthene, pyrelene, pyrene, chrysene, flourene and naphthalene), saturated hydrocarbons, volatile BTEX compounds, biomarker terpane and sterane compounds in seafood products (mullet, blue crab, shrimp, and oysters), sweater and sediments samples will be determined. Sensory evaluation of uncooked and/or cooked seafood will be determined. Microbiological (total count, Vibrios, E.coli, and Salmonella) in seafood, seawater, and sediments will be determined. Protein and lipid compositions of seafood products will be determined. Nutrients and heavy metals in seafood, sweater and sediments samples will be determined. Salinity, turbidity, pH, and dissolved oxygen of seawater will be determined. This proposal would allow us to develop methods/approaches to determine the quality of seafood, sediments, and seawater in the event the oil spill incident happens again in the future. The outcome of this project will allow us to understand whether the Gulf Coast of Mississippi is restored from the BP oil spill and if the seafood produced in the Gulf of Mexico is safe to consume. This may increase the consumers' confidence of Gulf of Mexico seafood, generate new jobs, and improve the quality of life of the fishermen/seafood processors and their families in Mississippi.		Yes	Yes	No	No	No	Yes	No		No		$ 3,500,000.00	$ -	
	Research and Education	3222	11/15/2014	Gulf-wide Bird Monitoring Program	Birds are a conspicuous and remarkable natural resource of the Gulf of Mexico, where they within a diverse array of habitats across the region. Hundreds of species and millions of individual birds are supported by habitats in and around the Gulf. Unfortunately, these coastal habitats are increasingly stressed by a variety of human demands that are often at odds with the value of these habitats as breeding, nesting, feeding and resting areas for birds. Anthropogenic stressors along with more natural disturbances can reduce the quantity and quality of habitats in sensitive coastal ecosystems. Regrettably, the conservation community continues to struggle to design and implement a large-scale, coordinated bird monitoring strategy to inform and facilitate integrated restoration and management of the Gulf of Mexico ecosystem. Mississippi State University and the U.S. Fish and Wildlife Service, in cooperation with a group of partners, have been working to develop a structured framework to identify bird monitoring objectives and priorities. This proposed effort seeks to advance an avian monitoring program by developing and communicating objectives and priorities to facilitate the design and implementation of surveys to maximize learning and improve the efficacy of restoration and management activities.	Hancock,St Tammany,Mobile,Jackson,Harrison,George	Yes	No	No	Yes	No	Yes	Yes		No		$ 21,400,000.00	$ 50,000.00	

	Research and Education	3223	11/15/2014	Understanding the Economic Linkages Between Coastal Restoration and Community Recovery from Damages Associated with the Deepwater Horizon Oil Spill	Background The Mississippi State University Center for Urban Rural Interface Studies (CURIS), holds a mission to provide a clearinghouse of information regarding community socio-economic profiles, changes in land use, community resiliency, economic and disaster preparedness, and economic impacts of natural and technological disasters. Founded in 2005 just prior to Hurricane Katrina, CURIS was funded by the U.S. Department of Commerce through a project titled â€œMitigating Coastal Development Impacts in Rural Communities in the Northern Gulf of Mexico Region: Establishing the Center for Excellence in Coastal Resource Management.â€ The Deepwater Horizon oil spill disrupted the Gulfâ€™s economy, damaged fisheries and critical habitats. In order to understand the magnitude of the Economic Impacts of Deepwater Horizon Oil Spill to the different economic sectors affected, multi-year baseline economic information about each sector was compiled from various secondary sources. Response to disaster fails for a number of reasons including lack of communication between adjacent communities, community officials, state, local and federal officials, relief organizations, and the public. Additionally, prior planning was inadequate. Research that helps communities integrate and strengthen responses will result in better preparation for both predicted and unforeseen disasters and provide necessary short-term responses for those events. In addition to continuing the regional work of the Center, we also propose to strengthen its programming by developing a tool to aid communities in planning for and responding to disasters, regardless of origin. The strategy will be called COAST Growth (Coordinated Organizational Assessment of Strategic Technology). We propose to use a Systems Analysis approach borrowed from engineering to examine how communities on the Mississippi Gulf Coast responded to Hurricane Katrina as a unit. Common processes or redundancies would be determined, and ways to integrate and strengthen processes would be developed. This data could then be used to develop a coordinated approach for other closely associated communities to use for disaster response. This could be used as a community planning, training and response tool. Results from this initiative will reduce money spent by state and local governments for infrastructure related to closely associated communities by targeting commonalities that can be exploited and differences that require closer attention. It also has the potential to mitigate damages from future disasters, regardless of origin, by providing information to aid in all levels of preparedness and response. Project Proposal This proposal will involve the following components â€" -Research on the long-term economic impacts of the oil spill to coastal counties -Research on economic recovery of the coastal counties -Research on linkages between coastal restoration and economic recovery -Community outreach involving the economic implications of coastal restoration projects	Hancock,Jackson,Pearl River,Forrest,Perry,George,Stone,St Tammany,Mobile,Washington	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes		$ 467,187.00	$ -	
	Research and Education	3224	11/15/2014	Development of MSLandPlan, a Forest Landowner Outreach and Engagement Effort to Conserve and Protect Private Lands and Waters in Mississippiâ€™s Lower 6 Counties	INTRODUCTION The lower 6 counties in Mississippi contain 1.7 million acres of forestland, and forestland is the major land use of this region. The major watersheds in this region include the Pearl River in the west, the Pascagoula River in the east, and a series of coastal rivers and streams in between. This region supports a number threatened and endangered species in both aquatic and terrestrial environments, including the gopher tortoise and the Gulf Sturgeon. Most of the forestland in this region is owned by individuals or families, with the vast majority of landowners owning less than 500 acres. There are, on average, about 1,500 unique forest landowners per county that own 10 or more acres of forestland. The National Woodland Owners Survey revealed, again, that most private landowners have multiple objectives for their forestland. Forests as a legacy for future generations, enjoyment of scenery, and land as an investment were the top three objectives of Mississippi landowners. Landowners with larger acreages had a much greater interest in timber income than those with smaller acreages. Private landowners are essentially small businesses, but only 10% of landowners have a written management plan that helps them identify and meet their objectives. Forest management plans also recommend strategies that protect soil, water, and other valuable resources. Managing forestland without a written plan is like taking a trip without a road map. This proposed effort will develop MSLandPlan, a robust but user-friendly management plan software template available for use on both computers and mobile devices. We will educate landowners on the importance of a good management plan, and develop a plan for them. Significantly increasing the number of landowners with written management plans will help them make correct decisions for their land, preserve and improve water quality, increase income from the property, and enhance their enjoyment of the land. A key element in the planning process is the use of Best Management Practices (BMPs) which focus on reducing soil erosion and sedimentation. The Mississippi State University Extension Service and the MSU Department of Forestry will lead this effort, but will involve other partners involved in water quality and land management in the development of MSLandPlan software. The partners include, but are not limited to, the Mississippi Forestry Commission and the Mississippi Department of Environmental Quality.	Harrison	Yes	No	Yes	No	No	Yes	Yes		Yes		$ 591,000.00	$ -	
	Research and Education	3225	6/1/2015	Development of the MississippiSound environmental education program at the Mississippi State University Crosby Arboretum, through the MSU-ES, to foster coastal community resilience	1. INTRODUCTION This proposal seeks to establish and implement a training program for the Gulf Coast region, called MississippiSound, through the Mississippi State University Extension Service (MSU-ES), with the mission of providing training, information, and resources for the general public to foster environmentally-friendly landscape practices. The consumer and community outreach program will encourage Gulf Coast stakeholders to utilize landscape design and management methods that will reduce property stormwater runoff and leaching leading to the contamination of surface and groundwaters. The Mississippi State University Extension Service has an established delivery method for extending knowledge to the public, and a proven track record. For more than 100 years, the MSU Extension Service has provided research-based information, educational programs, and technology transfer focused on issues and needs of the people of Mississippi, enabling them to make informed decisions about their economic, social, and cultural well-being. Extension's overall purpose is to provide education that will empower people to make intelligent decisions relating to their vocations, their families, and their environment. The Extension Service believes that quality of life is affected by the reciprocal relationship between people and their environment and therefore, environmental issues are of great importance. The Crosby Arboretum, located within the Gulf Coast region, is the premier environmental education center in the state of Mississippi, dedicated to educating the public about their environment. The 104-acre interpretive site is owned by Mississippi State University and operated by the MSU Extension Service. The Arboretumâ€™s mission is to preserve, protect, and display plants native to the Pearl River Drainage Basin ecosystem, a major Mississippi watershed. The facility provides environmental and botanical research opportunities, and cultural, scientific, and recreational programs, as well as programs which provide education about the region's biological diversity. The Arboretum also maintains 700 acres of off-site natural areas in the Gulf Coast region, preserved for scientific study. Many rare, threatened, and endangered species of plants and wildlife are found within Arboretum preserves. The mission of the Crosby Arboretum supports the directives of MSU and the Extension Service. The MSU Extension Service provides research-based information, educational programs, and technology transfer focused on issues and needs of the people of Mississippi, enabling them to make informed decisions about their economic, social, and cultural well-being. Agriculture and natural resources, family and consumer education, enterprise and community resource development, and 4-H youth development are Extensionâ€™s ongoing priorities. The Coastal Research and Extension Center has five Agricultural and Forestry Experiment Station units in south Mississippi. Research and Extension priorities include horticulture, beef cattle production, seafood safety, natural resource economics, and coastal ecology. The East Gulf Coastal Plain Ecoregion The lands that adjoin the Mississippi Gulf Coastal region comprise the 42 million acre East Gulf Coastal Plain Ecoregion (EGCP). This ecoregion is one of the most biologically diverse terrestrial landscape systems found in North America, and many of the plants, reptiles, amphibians and fishes occur only within this region (MDWFP, 2005). Twenty-nine endangered or threatened animal species live within these forests, which harbor at least 122 species of threatened or endangered plants, some of which occur on Crosby Arboretum MSU-ES natural lands, including the gopher tortoise, and the	Pearl River	Yes	No	No	No	No	Yes	No		No		$ 590,200.00	$ -	
	Research and Education	3226	11/15/2014	Autonomous boat for routine monitoring of water quality (nutrients, trace metals, microbial communities and physical measurements) in Mississippi Sound	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. In a separate propose we presented the idea of using continuous fluid samplers in fixed (Eulerian) locations to monitor water quality using a system that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. This provides the ultimate record at fixed points. However, for some monitoring needs there is the desire for a larger spatial coverage (or Lagrangian distribution) and the need for larger volume samples for additional measurements. To meet this need we propose to develop an autonomous surface boat that is instrumented with physical and chemical sensors and capable of collecting up to 48 (500 ml) samples that can be preserved autonomously in the field. Such automation exists for science-based surface craft missions (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and is well suited for operation within the shallow, but busy waters of Mississippi Sound. The benefits of an autonomous boat are many. The boat can be (1) launched and programed by one person, who can monitor the boat locally, with others monitoring results using a web interface from their offices scattered about the state, (2) limits liability by taking the human out of the element while allowing the human to monitor obstacle avoidance sensors and other tracking and sensor systems. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust operational parameters Specifically, we will use a Mokai â€œjet-poweredâ€kayaks with a cruising speed of 20 knots. This kayak will include navigation, communication, obstacle avoidance, physical and chemical sensor, and sampling systems. The science package will include a single beam sonar, CTD, multi-spectral fluorometer, nitrate analyzer, dissolved oxygen and pH sensors, turbidity, and fluid sampling systems. The fluid sample will be a â€œMcCleanâ€style sampler that is capable of collecting 48 discrete samples that can be filtered in-line and immediately preserved if desired.	Hancock,Jackson,Harrison	Yes	No	No	No	Yes	Yes	Yes	20	Yes		$ 530,000.00	$ -	Proposed Research Developement

	Research and Education	3227	11/15/2014	Integrated Assessment of Water Quality in Bay St. Louis and the Hot-Spots of Pollutant Sources in the Sub-watersheds feeding into Bay St. Louis under Different Climate Scenarios	The overarching objective of this project is to develop a suite of tools and products to identify and locate sources, transport pathways, and fate of pollutants flowing into Bay St. Louis, Mississippi, assess their ecological impacts, and develop management strategies. The proposed work is a field, laboratory, remote sensing, watershed modeling, and GIS based research approach focused on quantifying the water quality deteriorating agents found in Bay St. Louis and source-tracking the pollutants detected in the sub-watersheds feeding into Bay St. Louis. We will test the hypothesis that terrestrial nutrient inputs from the watersheds lead to eutrophication in Bay St. Louis Mississippi, which tends to worsen in future because of climate change. The end result will be a Decision Support System (DSS) that will be updated with the images of Harmful Algal Blooms (HABs), sediments and colored dissolved organic matter (CDOM) in near real-time. The DSS will also include visualizations of source-tracking the pollutants using digital elevation models (DEMs) and CDOM fluorescence. Additionally, the DSS will be updated time-to-time with images showing the hot-spots of pollutant sources in the watersheds in different climate scenarios. The first aim of this project is to investigate the water quality of Bay St. Louis by measuring the concentrations of suspended sediments, chlrophyll a, CDOM, nitrogen, phosphorous and a few other ancillary water quality parameters. The second aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) spatial resolution satellite sensors as well as very high spatial resolution remotely sensed data collected by unmanned aerial systems (UASs) and utilizing them for extracting improved water quality products for making the mapped images available in near real-time. The third aim is to track the source of the pollutants and locate the hot-spots of pollutant sources using watershed modeling approach. The fourth aim is to develop maps detailing the classes of water and sediment yields as a response to changes in precipitation, temperature, and CO2 levels under different climate scenarios 20-30 years into the future. The final aim is to disseminate the project findings to four categories of target audience including (1) state and local water managers, (2) MSU graduate and undergraduate students, and selected middle and high school teachers, (3) the general public including the farmers, and (4) the scientific community. The final aim also includes providing the methods and products to the water managers showing the vulnerable regions where best management practices (BMP) should be implemented and the total maximum daily loads of pollutants (TMDL) should be allocated in the sub-watersheds. This research is significant because it will not only enhance the current state of knowledge in identifying the hot-spots of pollutant sources with different climate scenarios but also it will provide a continuous monitoring platform for the HABs, sediments, and dissolved materials, which will support state and coastal community efforts to manage water quality in the region. Since Bay St. Louis is similar in many ways to other coastal water environments, this research may also be applicable to other shallow estuaries. Furthermore, data generated from these efforts will address critical links between the watershed, water body and human health as they relate to future climate change. This is a three year project and will supplement ongoing planning activities as well as serve as decision support tool as new projects are recommended. The estimated cost is $300,000 per year for a total cost of $900,000.		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -	
	Research and Education	3228	11/15/2014	A Time-Series Analysis of Invasive Plant Species along the Mississippi Gulf Coast using Unmanned Aerial Systems, Hyperspectral Sensors and Satellite Remote Sensing Technologies	Invasive plant species are recognized as one of the greatest threats to the survival of many indigenous species. The five Gulf States together including Mississippiâ€™s coastal wetlands are affected by at least thirty species of non-indigenous invasive plant species. Dealing with this enormous environmental problem requires collaborative efforts on the part of many agencies and organizations, but it ultimately begins with detection and mapping of the non-indigenous invasive species. After mapping, a change detection analysis would further help in delineating areas where management efforts should be prioritized to contain the growth of the problematic species. Remote sensing technologies offer an opportunity to address the invasive species problem by providing timely information on the spatial distribution of any plant species, including those that could threaten the ecological balance. The overarching objective of this project is to develop a suite of tools and products to locate and delineate the spatial coverage of ten most pervasive invasive plant species that occur along the Mississippi coast and provide results from change detection analyses extracted from a time-series of geospatial products collected using remotely sensed data. The end result will be a Decision Support System (DSS) that will be updated with the images of invasive species on a monthly basis. The DSS will also include images of the hot-spots of invasive species growth in the areas that were originally dominated by indigenous species. The first aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) spatial resolution satellite sensors as well as very high spatial resolution remotely sensed data collected by unmanned aerial systems (UASs) and very high spectral resolution remotely sensed data collected by a hyperspectral system, AisaEAGLE, flown on an aircraft. The data from the UASs and the hyperspectral data will help develop models, which will be implemented on the data from the satellite sensors for extracting invasive species maps and the mapped images will be made available on a monthly basis. The second aim is to run a change detection analysis to delineate areas of extensive invasive plant species growth that was originally occupied by indigenous species. A trend analysis will also be carried out to locate areas where management efforts should be prioritized to contain the growth of the problematic species. The final aim is to disseminate the project findings to four categories of target audience including (1) state and local managers, (2) MSU graduate and undergraduate students, and selected middle and high school teachers, (3) the general public, and (4) the scientific community. The final aim also includes providing the methods and products to the managers showing the vulnerable regions where management efforts should be prioritized. This research is significant because it will not only enhance the current state of knowledge on the occurrence of invasive species on the Mississippiâ€™s Gulf coast but also it will provide a continuous monitoring platform for at least ten invasive plant species, which will support state and coastal community efforts to manage wetlands in the region. This is a three year project and will supplement ongoing planning activities as well as serve as decision support tool as new projects are recommended. The estimated cost is $300,000 per year for a total cost of $900,000.		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -	
	Research and Education	3229	11/15/2014	A Stormwater Bacterial Decision Support System (SBDSS) for Assisting State and Local Water Managers in Minimizing Beach Closures	The northern Gulf of Mexico waters are affected by water pollution, leading to undesirable increases in disease-causing bacteria (pathogens). Bacterial contaminations of surface waters are an increasing concern for state and local water managers because pathogenic bacteria can cause adverse effects on human health. An array of bacteria such as Vibrio, Mycobacteria and Enterococci are responsible for severe infections in people exposed to sea water or raw shellfish and also pathogenic to a lot of aquatic organisms in the northern Gulf of Mexico. One recent event that made news was the death of a man due to Vibrio Vulnificus infection in Ocean Springs, MS on July, 11, 2014. According to the Centers for Disease Control and Prevention Mississippi had 17 reported cases of Vibrio infections, Louisiana had 52; Florida, 145; and Alabama, 20 in 2012 alone. Since it is difficult, time-consuming, and expensive to test directly for the presence of a large variety of pathogens, studies conducted by EPA suggest that the best indicators of health risk from recreational water contact in fresh water are E. coli and enterococci and for salt water, enterococci are the best. The overarching objective of this project is to develop a suite of tools and products to identify and locate sources, transport pathways, and fate of enterococci flowing into Bay St. Louis, Mississippi from storm-runoff. The proposed work is a field, laboratory, remote sensing, watershed modeling, and GIS based research approach focused on quantifying the suspended sediments and colored dissolved organic matter (CDOM) found in Bay St. Louis, deriving the enterococci concentrations from the correlations of sediments and CDOM with enterococci by accounting for the spatial distribution, intensity and amount of rainfall in the subwatersheds, and source-tracking the pollutants detected in the sub-watersheds feeding into Bay St. Louis. The end result will be a Decision Support System (DSS) that will be updated with the images of bacterial contaminants, sediments and colored dissolved organic matter (CDOM) in near real-time. The DSS will also include visualizations of source-tracking the bacterial contaminants using digital elevation models (DEMs) and CDOM fluorescence. The first aim of this project is to investigate the water quality of Bay St. Louis by measuring the concentrations of bacterial contaminants, suspended sediments, CDOM and a few other ancillary water quality parameters. The second aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) resolution satellite sensors as well as very high resolution remotely sensed data collected by unmanned aerial systems (UASs) and utilizing them for extracting improved products for mapping suspended sediments and CDOM, and making the mapped images available in near real-time. The third aim is to apply the Soil and Water Assessment Tool (SWAT)/microbial sub-model and compare the model-simulated bacterial concentrations with the monthly measured bacterial concentrations at the outlet of the watershed and to track the source of the pollutants and locate the hot-spots of pollutant sources using watershed modeling and CDOM fluorescence. The fourth aim is to develop maps detailing the classes of water and sediment yields and deriving correlations of suspended sediments and CDOM with enterococci so that enterococci concentrations can be estimated from suspended sediment and CDOM concentrations by accounting for the spatial distribution, intensity and amount of rainfall in the subwatersheds. The final aim is to disseminate the project findings to four categories of target audience including (1) state and local water managers, (2) MSU graduate and undergraduate students, and selected middle and high school teachers, (3) the general public including the farmers, and (4) the scientific community. This effort will help watershed managers to implement best management practices for improvement of water quality as well as in minimizing beach closures. Since Bay St. Louis is similar in many ways to other coastal water environments, this research may also be applicable to other shallow estuaries. This is a three year project and will supplement ongoing planning activities as well as serve as decision support tool as new projects are recommended. The estimated cost is $300,000 per year for a total cost of $900,000.		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -	
	Research and Education	3230	11/16/2014	Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project are: 1.ÐUnderstanding Stakeholder Beliefs and Perceptions: The First Step toward Effective Engagement, Awareness, Outreach, and Policy Development To formulate effective engagement, outreach and educational programs requires an understanding of the underlying beliefs and values of various target audiences. Every individual, every community, and every culture has a set of beliefs and values that guide decision-making. Through the use of social science survey instruments, the underlying beliefs and values of selected target audiences will be surveyed at the local and regional scales to serve as a basis for effective engagement, technology transfer, education and outreach through the expanded Coastal REACH Program and to serve as a reference to gauge the effectiveness of these efforts. This information should also be very useful to the RESTORE Council as it considers project selection and evaluation. 2.ÐDeveloping Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities Social indicators are measures that describe the context, capacity, skills, knowledge, values, beliefs, and behaviors of individuals, households, organizations, and communities at various geographic scales. Social indicators are typically used to assess current conditions or attainment of social goals related to a variety of applications. Building upon Project 1 (described above), this project will identify and define social indicators that can be used to guide and incrementally evaluate habitat and water quality restoration and protection projects developed to implement the RESTORE Councilâ€™s Comprehensive Plan. The indicators can also be leveraged to serve as a common reference to evaluate the success of individual coastal watershed restoration and protection projects. This foundational project will be designed to support and evaluate many of the activities and projects facilitated by the RESTORE Council by addressing the societal dimensions inherent in the Councilâ€™s Comprehensive Plan. A wide range of questions exist that, if answered and monitored, could help the RESTORE Council achieve the success that it desires, such as: What constitutes project success from a societal standpoint? What expectations do different types of stakeholders have? What types of projects are desired geographically? What information is needed to inform stakeholders and where is it needed? How effective are education and outreach activities? What can be done to improve these efforts? What are stakeholders saying through social media? Starting with analysis of the input generated through local stakeholder meetings facilitated by RESTORE Council members that influenced the Councilâ€™s approach; to developing social metrics; to conducting baseline assessments; through incremental monitoring as projects are conceptualized, implemented, and completed; the objectives of this project could provide great benefit during planning, implementation and evaluation of many, if not most, of RESTORE Council projects and activities. This project was created to offer significant advantages to the RESTORE Council to assist in implementation of its Comprehensive Plan. This concept: 1.Ðcan support all five of the RESTORE Councilâ€™s goals and other engagement, research, technology transfer, education and outreach needs;	Hancock, Harrison, Jackson	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 3,200,000.00	$ -	

	Research and Education	3231	11/16/2014	Regional Coastal Land Grant University and Extension Initiative: Disseminating RESTORE Council-facilitated Coastal Restoration and Protection Projects, Activities, Outputs and Outcomes through Annual State-wide Conferences, Gulf-wide Summits and Extension	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project concept are: 1.Establishing a structure and processes for regional collaboration among Gulf of Mexico land grant universities and their coastal Extension programs to foster a consistent Gulf-wide approach that leverages Extension activities and capabilities to support the engagement, technology transfer, education, outreach and extension priorities of the RESTORE Councilâ€™s Comprehensive Plan. 2.Disseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€" from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Extension Service. The Smith-Lever Act of 1914 established the Cooperative Extension System, a publicly funded, informal educational system that links the U.S. Department of Agriculture, the land grant university system, and individual counties. Extension, as the off-campus educational arm of land grant universities, has a large footprint in each state with offices in all or most counties and trained staff to provide community education and outreach in multiple disciplines. Extension's overall purpose is education. Its unique interdisciplinary perspective enables the organization to make a real difference through the provision of research-based information, educational programs, and technology transfer focused on issues and needs of the citizenry of each state. Extension also hosts customer-friendly websites loaded with information sheets, publications, reports and other outreach materials designed for its stakeholders. Extension is organized regionally; however, the Extension structure on the Gulf coast is separated into two regions. Objective 1. Establishing processes for regional collaboration among Gulf of Mexico land grant universities and Extension programs. Objective 1 is a foundational component that establishes processes, through existing land grant university infrastructure, that leverages participating coastal Extension and other programs to provide a consistent, coordinated, multi-state approach that delivers effective engagement, research, technology transfer, education, outreach and extension to support implementation of the RESTORE Councilâ€™s Comprehensive Plan. It is envisioned that the successful implementation of this objective will foster 1) the development of integrated, multi-state, Gulf-wide restoration and protection projects and activities that leverage the significant resources and capacity of coastal land grant universities and Extension, and 2) serve as the platform upon which to implement Objective 2 of this proposal (below). Objective 2. Disseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ -	$ -	
	Research and Education	3232	11/16/2014	Coastal Land Grant University Initiative: Coastal Storm Water and Waste Water Workshops and On-line Management Toolbox to Advance Effective Storm Water and Waste Water Management along the Gulf Coast and Reduce Nutrient, Pathogen and Sediment Loadings	Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€" from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Coastal Storm Water and Waste Water Workshops and On-line Management Toolbox to Advance Effective Storm Water and Waste Water Management along the Gulf Coast and Reduce Nutrient, Pathogen and Sediment Loadings to the Gulf. Pollution caused by storm water continues to be a problem in urban coastal watersheds evidenced by the constant reoccurrence of beach closures and/or advisories due to high pathogen levels after heavy rain events and in agricultural coastal watersheds evidenced by the existence of nutrient, pathogen and sediment impairments. Expanding economic development along the coast is also challenging the capacities of state and local storm water programs and resources. This project is designed for Extension, Mississippi State Universityâ€™s (MSU) Coastal REACH Program, and the Mississippi Water Resources Research Institute (MWRRI) to work with state and local agencies/entities administering coastal storm water programs to increase their engagement, technology transfer, education and outreach capacity and effectiveness through targeted workshops that focus on effective storm water management practices as well as the benefits of various storm water ordinance options available to local communities. In coastal watersheds, numerous TMDLs have been developed for impaired waters that identify specific nutrient and pathogen load reductions from both point and nonpoint sources needed for the receiving streams to meet their designated uses. States are also being encouraged by EPA to make progress on the development of numeric nutrient criteria. Waste water treatment in coastal watersheds uses a variety of treatment systems â€" from large facilities to cluster systems to individual treatment systems. The reduction of nutrient and pathogen levels in effluent from these systems can be costly at every level. This project is designed for Extension, MSUâ€™s Coastal REACH Program, and MWRRI to first evaluate the preponderance of system type geographically and status of water quality in coastal watersheds; identify the range, effectiveness, and costs of appropriate treatment options available to reduce nutrient and pathogen loadings in targeted watersheds; through workshops provide utility officials, operators, consultants, and contractors the knowledge to make decisions that maximize environmental and economic benefits; and establish a network for the sharing of information among coastal wastewater interests. This project will require coordination with state environmental agencies and waste water treatment interests. A component of this project includes the development and maintenance of a web-based Coastal Storm Water and Waste Water Management Toolbox as an extension of the workshops. Initial implementation of this project would focus on coastal Mississippi. The project would then be expanded to the other states through the Coastal Land Grant University Initiative and funding proposals for the expansion submitted to each participating state. This project concept was created to offer significant advantages to the RESTORE Council to assist in implementation of its Comprehensive Plan. This concept:	Hancock, Harrison, Jackson, Pearl River, Stone, George	Yes	No	No	No	No	Yes	No		Yes		$ 450,000.00	$ -	
	Research and Education	3236	11/17/2014	Community-based Environmental Planning and Design Assistance for Living Shorelines and Tidal Marsh Restoration.	Community-based Environmental Planning and Design Assistance for Living Shorelines and Tidal Marsh Restoration. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD, Department of Energy, Small Business Administration, the National Endowment for the Arts, and the Department of Homeland Security, along with many local and regional partners. For the past three years the design studio has been working in partnership with other Gulf Coast planning agencies with the support of HUDâ€™s Sustainable Communities Initiative to produce Plan For Opportunity, a regional plan for a more resilient and sustainable Gulf Coast. Recently, the GCCDS was part of one of ten national design teams selected by HUD to participate in Rebuild By Design, in which teams worked with communities in the North East impacted by Super Storm Sandy to design more resilient future cities. The Gulf Coast Community Design Studio is well experienced in community-based restoration projects. Since 2010 the Gulf Coast Community Design Studio has been working in partnership with several other organizations to restore Bayou Auguste, an inner-city bayou that connects East Biloxi to the Back Bay. The GCCDS is the lead organization and brought together five partners to work together on the restoration project: The Land Trust for the Mississippi Coastal Plain, The City of Biloxi, Biloxi Public Schools, the Biloxi Housing Authority, and a local environmental science firm called Cypress Environmental. For the past year the Gulf Coast Community Design Studio has been doing a Watershed Implementation Plan for Rotten Bayou in Hancock and Harrison County. The planning activities include extensive community engagement and professional workshops as well as designing and installing best practices. The plan is funded by the Mississippi Department of Environmental Quality to the Land Trust for the Mississippi Coastal Plain. In addition to Bayou Auguste and Rotten Bayou, the GCCDS is designing a wetland nature park in Moss Point, is working with The Nature Conservancy on a living shoreline and oyster break-water in Biloxi, and with funding from the Surdna Foundation is doing community-based storm-water planning in Biloxi and Gulfport. As a program of Mississippi State University, GCCDS works through the Office of Sponsored Programs, is experienced at grant funded work and has the ability to adapt to the needs of the project. In the years immediately following Hurricane Katrina, when HUD funds were administered through Mississippi Development Authority, MDA recognized the benefit of having the Gulf Coast Community Design Studio on contract to be able to provide professional services as needed to many of the home building organizations. GCCDS assisted five non-profit building organizations and provided house designs for over 300 house projects. By having an independent contract for professional services GCCDS was able to establish a high standard of quality and sustain effective homeowner involvement from the first house to the last. At the same time because of the efficiency of working on multiple projects GCCDS was able to manage the work to meet the tight budgets and demanding schedules.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 200,000.00	$ -	
	Research and Education	3237	11/17/2014	Job Training for Living Shorelines and Tidal Marsh Restoration.	Job Training for Living Shorelines and Tidal Marsh Restoration. A benefit of the RESTORE funds will be creating a stronger demand for skilled workers to install living shorelines and do work to restore tidal marshes. The skills for such green jobs combine construction and landscaping skills along with a sufficient knowledge of tidal ecology to be able to understand the end goals of a restoration project. The outdoor work environment is demanding and requires good work habits to be safe and productive. What is more, such projects are interesting to the general public and have the potential to encourage people to take better care of the environment. Therefore, the project installers often have opportunity to engage with people on site to explain the project. There is growing interest with private property owners to apply best practices to water front property and instead of rebuilding bulkheads to use more resilient and ecologically beneficial shoreline improvements. So the workers on site should understand the project and be able to explain the benefits of the project to curious site visitors. There will be a need for job training for living shorelines and tidal march restoration. The RESTORE funds for restoration projects can be leveraged to pay for such job training as a way to build capacity for future restoration projects. Many of the jobs created by such projects have pay comparable to building construction jobs and, like building construction, are job skills that are best gained by hands-on learning. The RESTORE funds will have a long-term impact on such emerging green jobs if training programs are part of the community benefits. Partnership The proposal is submitted by the Gulf Coast Community Design Studio in partnership with Moore Community Houseâ€™s Women in Construction Program. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD, Department of Energy, Small Business Administration, the National Endowment for the Arts, and the Department of Homeland Security, along with many local and regional partners. For the past three years the design studio has been working in partnership with other Gulf Coast planning agencies with the support of HUDâ€™s Sustainable Communities Initiative to produce Plan For Opportunity, a regional plan for a more resilient and sustainable Gulf Coast. Recently, the GCCDS was part of one of ten national design teams selected by HUD to participate in Rebuild By Design, in which teams worked with communities in the North East impacted by Super Storm Sandy to design more resilient future cities.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 90,000.00	$ -	Curriculum development

	Research and Education	3239	11/17/2014	Inner-City Tidal Stream Restoration	Inner-City Tidal Stream Restoration Scope Much of the tidal habitat along the Mississippi Gulf Coast is distributed in small waterways that flow through inner-city neighborhoods. A healthy inner-city tidal stream has four critical functions: nursery habitat for marine life; flood-way for tidal storms; discharge and treatment for storm water; and convenient public access to natural environments. Unfortunately, most of the inner-city tidal streams are seriously impaired, have been modified and degraded over time and are not providing the ecological services that these four functions support. Many of them have been reduced to drainage channels, thus only functioning to discharge storm water â€" and often not doing that well. Restoring inner-city tidal streams to provide all four of the critical functions not only creates important tidal marsh habitat, it improves storm water management and flood mitigation, and if done with good community involvement, it increases environmental stewardship. Successful inner-city restoration projects show that bringing nature into neighborhoods helps people see the value of protecting natural environments not only close to home but in larger, wilder places away from our cities. Partnership The proposal is submitted by the Gulf Coast Community Design Studio. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD, Department of Energy, Small Business Administration, the National Endowment for the Arts, and the Department of Homeland Security, along with many local and regional partners. For the past three years the design studio has been working in partnership with other Gulf Coast planning agencies with the support of HUDâ€™s Sustainable Communities Initiative to produce Plan For Opportunity, a regional plan for a more resilient and sustainable Gulf Coast. Recently, the GCCDS was part of one of ten national design teams selected by HUD to participate in Rebuild By Design, in which teams worked with communities in the North East impacted by Super Storm Sandy to design more resilient future cities. Since 2010 the Gulf Coast Community Design Studio has been working in partnership with several other organizations to restore Bayou Auguste, an inner-city bayou that connects East Biloxi to the	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 90,000.00	$ -	
	Research and Education	3240	11/14/2014	Women in Construction Program	Organizational Overview: Moore Community House (MCH) was founded in 1924 to serve the children of migrant workers in the seasonal fishing industry. Today MCH responds to the needs of low-income women and young children in east Biloxi through two programs that research shows make the most strategic and positive difference in moving a low-income family closer to self-sufficiency: quality affordable early childhood education and job training that leads to higher paying employment. Through the Women in Construction Program (WinC), MCH creates a pathway for low-income women to higher paying jobs in the construction industry. Women make up nearly half of the workforce in Mississippi (MS) but women earn less than men at every income and education level, and in every profession. Women are clustered in low paying jobs, making up 80% of minimum wage workers. MS has the highest rate of single-mother headed families, mothers who bear financial responsibility for children. Minimum wage leaves a family of 2 (mom and child) below the federal poverty level. Construction jobs are the only ones in MS where women earn the same wages as men, and these jobs pay an hourly wage identified by the MS Economic Policy Center as a self sufficiency wage. Thus, WinC offers a pathway for women to family economic security. The mission of WinC is to create a climate across the Gulf Coast enabling women to pursue careers which will allow them to earn wages to promote self sufficiency within the construction field. Besides helping provide well-paying jobs to the region's low-income women, it helps meet industry demands for a trained workforce. While the construction trades offer careers that provide self-sufficiency wages and good benefits, WinC is the only job-training program in the region that is tailored to prepare women for this work. At this point and time it is critical to maintain momentum by expanding programming, reaching more women, and strengthen the community towards economic and ecological recovery. Since inception of the program, WinC has graduated 22 classes totaling 220 plus women in the fields of general construction, welding, green job training, and disaster relief and recovery. Of the 220 plus women who have graduated the program, 75% of these individuals have gained employment. Graduates have gained living wage jobs in apprenticeship and nontraditional occupations in trades such as, welding, shipfitting, habitat restoration, and construction management, earning from $14 to $28 an hour. WinC is feminizing the face of construction on the Gulf Coast one well-trained woman at a time. Qualitative data is used to assess impact that improves socioeconomic wellbeing. Participants have made cross cultural bonds, left abusive relationships, gained GEDs, housing, improved upon health/wellness, and made huge strides that improve their wellbeing and quality of life. Proposed action: Moore Community House seeks RESTORE funds of $1,500,000 for Women in Construction Program to recruit, train, and place women into jobs created by RESTORE projects; and to improve the outreach, training, employment, and retention of women in nontraditional occupations; as well as train low-income women in construction trades and in skills required by current and upcoming industries. By using innovative techniques, this program will expose women to nontraditional career pathways that meets the demands of future ecosystem restoration projects along the Gulf Coast through upcoming RESTORE opportunities. The goal of the proposed program is to place women into employment focusing on skills such as living shoreline, marsh creation and environmental recreation construction while increasing capacity	Mobile,Jackson,George,Hancock,Stone,St Tammany,Pearl River,Harrison	Yes	No	No	No	Yes	Yes	No		Yes		$ 1,500,000.00	$ 250,000.00	
	Research and Education	3241	11/17/2014	College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA)	Brief Title: College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA) Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438; Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402; Dr. Faye Gilbert, Faye.Gilbert@usm.edu, 601-266-5544 Type of project: _x_Infrastructure __x_ Educational program __x___Research program __x_Workforce development __x_Economic development __x_ Eco-Restoration __x_ Seafood __x__Other (Name): Tourism Brief description of activities: The proposed building will house the College of Business on the USM Gulf Park campus and the Center for Coastal Analytics (CCA). Since Hurricane Katrina, the College of Business at USM Gulf Coast (CoBGC) has been housed in an inadequate modular structure. The CoBGC serves the educational needs of over 500 undergraduate and 100 MBA students each year. The CoBGC operation will include the new Center for Coastal Analytics (CCA), created for the purpose of conducting economic impact analyses, primary research projects, financial analyses, business assistance for entrepreneurial start-ups, and graduate education focused on two critical sectors of the Mississippi Gulf Coast economy: blue economy activities and Coastal tourism. The new building (and CCA) will be constructed on the Gulf Park campus of the University of Southern Mississippi and will unite and house the intellectual capital of the College of Business. The CCA will provide long-term economic impact analyses and primary research for the commercial seafood fisheries (i.e., shrimp, crab, oyster, spotted seatrout, red snapper), recreational fisheries and marine tourism, and Coastal tourism sectors unique to the Mississippi Gulf Coast (gaming, hotels and lodging, restaurants, sports tourism, ecotourism, creative economy tourism, culinary tourism, festivals and events unique to the area such as Cruisinâ€™ the Coast). The CCA will provide business plan assistance and training to support entrepreneurial activities. The CoBGC and the CCA will support the development of two unique graduate certificate programs in the country: marine economics and coastal tourism. These programs will train graduate students from the marine sciences and fisheries in the business analytics and strategies associated with Coastal marine activities; the certificate in coastal tourism will train graduate students and working professionals/executives in the business valuations of tourism sectors and new ventures. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $30,000,000 (1 year) Annual Operation & Maintenance Cost (# years): $500,000/year for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? Establishment of the CoBGC and the CCA will foster research and graduate education unique to the coastal economy of Mississippi and will directly support the common themes that emerged in every section of the GoCoast 2020 final report: the need for economic impact analyses and primary business research and education. The collective call for business research and assistance is supported by	Harrison	Yes	Yes	Yes	Yes	Yes	No	Yes	86	Yes		$ 35,000,000.00	$ -	
	Research and Education	4244	11/18/2014	National Center for Strategic Planning and Emergency Response	Natural and man-made disasters are a part of this nationâ€™s landscape as evidenced dramatically on the Mississippi Gulf Coast by Hurricane Katrina and the Deepwater Horizon Oil Spill. News of other disasters, contagious diseases and national security threats is a daily occurrence. Strategic planning and preparedness is essential for the protection of life and property and quick response to and recovery from such events. To provide strategic planning and training services to communities, individuals, businesses and officials who plan and prepare for, take actions to protect against, respond to and oversee recovery from disasters and emergencies, Mississippi Gulf Coast Community College (MGCCC) proposes the â€œNational Center for Strategic Planning and Emergency Response Training.â€With a robust focus on strategic planning and community resilience, the goal of this project is the planning, development and implementation of a comprehensive center that will provide strategic planning and training services to a local, regional and national audience. Objective 1: Planning activities shall include the establishment of an advisory team consisting of local, regional and national representatives, defining a specific mission and scope of work for the Center, identifying a physical location for the Center, and researching best practices for Center operations. Objective 1 outcomes will be a well-qualified advisory team, a mission statement and scope of work for the Center, a defined location for the Center and the identification of best practices for use in the deployment of the Center. Objective 2: Development of the Center shall consist of physical, operational and programmatic activities. Activities will include securing and equipping a physical location, hiring Center personnel, development of strategic planning methodologies, training programs, a marketing plan and other activities as required to meet the outcome of establishing an operational, National Center for Strategic Planning and Emergency Response Training. Objective 3: Implementation of the Center will focus on initiating the developed strategic planning process in the local coastal community and expanding it to other communities nationwide and on offering the identified and developed training to communities, individuals, businesses and officials who are on involved in strategic planning and the preparation for, response to and recovery from disasters at the local, regional and national levels.	Harrison, Jackson, Hancock, Stone, George, Pearl River	Yes	No	No	No	Yes	No	Yes	75	Yes		$ 20,000,000.00	$ -	

	Research and Education	4249	11/26/2014	Evaluating the Impact of Upland Land Use Land Cover Change on Water Quality of the Mississippi Sound Estuary	Objective: Develop a decision support tool to evaluate the impacts of upland land use land cover (LULC) change on coastal water quality and provide analytical tools to help select the most suitable areas for restoration and as sites for monitoring the progress of the restoration. Background: With the development of the gaming and tourist industry, Mississippi's Gulf coast has experienced rapid growth in population and economic activity in the past several years. The population of the coastal counties in Mississippi has been increasing and continues to increase, resulting in changes to the land use and the land cover on the coast and in the upland areas. According to new U.S. Census population estimates the Mississippi Gulf coast has three of the top 10 fastest growing cities in the state from 2012 to 2013. In response to this rapid growth in coastal population and economy, the Mississippi Department of Marine Resources (DMR), the lead agency for the State's Coastal Management Program, developed the Comprehensive Resource Management Plan (CRMP). The CRMP seeks to balance natural resource protection and economic development through cooperation among local, state, and federal agencies and the private sector. Land use/land cover and water quality are unequivocally linked. Change in the upland land use and/or land cover can impact water quality in the coastal areas. Coastal waters receive runoff from surrounding watersheds that drain these upland areas into the coastal estuary. Changes in the LULC of the upland portions of coastal watersheds can produce increased amounts of nutrients, sediment, and other pollutants. Proper understanding of these complex processes will result in better decisions and make the restore process more sustainable. This understanding will play an important role in coastal restoration by helping decision makers select the most suitable areas along the coast to restore and/or purchase and to model and monitor the effect of the restoration activity. The modeling part of the decision support tool will allow decision makers to ask; â€˜what ifâ€¦â€™ questions about a part of a watershed. Project Description: The proposed will develop a decision support system (DSS) (Figure 1) by integrating remote sensing and geospatial analysis with existing and validated numerical watershed models to analyze potential restoration decisions and provide possible outcome scenarios. The DSS will integrate geospatial data characterizing the drainage network, current and/or past LULC, and the EPA's coupled watershed and water quality model Better Assessment Science Integrating point & Non-point Sources (BASIN), which has been developed and tested by the EPA. The interface to the model and the DSS will be in a web mapping service created as part of the project. The web mapping service will be developed inside a Geographic Information System (GIS) and will allow users to evaluate potential development projects through a web portal. The integrated models will accept user input for a selected area, run the scenario, and present the results in a geographic format. The goal is to evaluate the potential changes in nutrient and pollution concentrations into the coastal environment by simulating the entire path of nutrients and pollutants from watershed to the drainage network and to estimate the impact on coastal water quality. This system will provide a tool for decision-maker to evaluate the water quality in the Mississippi Sound estuary (Figure 2), and analyze the impact of upland land use and land cover change. The BASIN model will quantify the Total Maximum Daily Loads (TMDLs) for nutrient and sediment management, and provide information	Hancock,Stone,St Tammany,Mobile ,Jackson,Pearl River,Washington,Harrison,George	Yes	No	No	No	No	Yes	No		No		$ 300,000.00	$ -	Evaluating and monitoring
	Research and Education	4257	12/8/2014	Habitat Mapping the Waters of Mississippi Sound	Benthic Mapping of the MS Sound: This project proposes to comprehensively map the Mississippi Sound using Multibeam Echo Sounders (MBES) augmented with Airborne Lidar Bathymetry (ALB) system. The underlying purpose of the project is to establish a baseline benthic habitat map of the Sound; however, the data have numerous additional uses. The data will provide measurements of pelagic biomass over various habitats and suitability of seafloor substrate to support existing or future reefs. The resulting Digital Elevation Model provides the essential boundary layer for dynamic modeling of the Sound to enhance, circulation, sediment transport, and storm surge/coastal inundation simulations. Revisit surveys to key areas can assess habitat response to natural or anthropogenic stresses, siltation, reef material subsidence, and sea level rise. The gold standard for obtaining high precision, hydrographic measurements is 100% coverage (insonification) of the sea floor using acoustic MBES. Obtaining 100% coverage of Mississippi Sound using MBES is an extensive project. Multibeam sonar covers a swath of the seabed out to a width of approximately 5 times the water depth. Figure 1 outlines the areas of the Mississippi Sound bounded by a depth contour of approximately 2 meters (black contour line). The average depth through The Mississippi Sound is less than four meters. Using the equipment currently owned by The University of Southern Mississippi, a maximum line spacing of 10 meters is required to obtain 100% coverage. Due to declining returns in shallow water and safety of navigation, a minimum survey depth of approximately 2 meters is recommended. A polygon of survey extent based on the 2 meter contour and a line spacing recommendation of 10 meters, an estimate of survey time can be established. Planning the lines in a north south orientation would allow for efficient data collection and manageable data files. The average width of Mississippi Sound is approximately 6 Nautical Miles (Nm), and with an average survey speed of 6 knots, each line of data collection will take approximately 1 hour to complete. If a line spacing of 10 meters is utilized from the Mississippi/Louisiana border to the Mississippi/Alabama border, a distance of approximately 120 km or 120000 meters, a line count of approximately 12000 lines can be then be assumed. 12000 lines each at a length of 6 Nm, equates to 72000 Nm of survey lines. Completing all lines would require 12000 hours. Other factors that need to be considered in a time estimate are transit times, turns between lines, time to obtain sound speed profiles, and time to take bottom samples. At a minimum, an additional 25% should be added to the initial line estimate, for a total of approximately 15000 hours. Completion time estimates based on single vessel operations show a projected completion time of 10 years, based on successfully collecting data 188 days per year. The time scales vary accordingly with addition of multiple vessels. Operational days per year will heavily depend on weather and equipment functionality and are difficult to estimate. This proposal recommends an upgrade to existing equipment to increase the efficiency of data collection to reduce the collection time to 5 years. Additionally, ALB systems provide an efficient method for collecting data useful in delineating benthic habitats in shallow water. The Coastal Zone Mapping and Imaging Lidar (CZMIL) was specifically	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	10	Yes		$ 4,515,000.00	$ -	
	Research and Education	4258	12/10/2014	Remediation of Oil Spills and Gas Releases by Biochar Activated at Low-Temperatures	I. Introduction Biochar has emerged as a promising sorbent for recovering or containment of marine crude oil spills (Nguyen and Pignatello, 2013). Biochars are porous, and has a bulk density lower than that of seawater so that biochar particles float on seawater. Biochars contain pores with hydrophobic internal surfaces that are wetted much faster by organic compounds rather than water (Gray et al., 2014). This difference is particularly noticeable when the biochar is produced from pyrolysis at low temperatures (e.g., 370Â°C). Thus, the spilled oil can effectively fil the pores of biochar particles while water cannot. Biochar can also adsorb the dissolved oil species and remediate the contaminated seawater. Biomass is abundant in the Gulf region and biochar is usually a byproduct in biofuel production. It is therefore relatively inexpensive compared to other synthetic absorbents. Moreover, the spent biochar can be burned directly along with the absorbed oil in controlled environments for energy production. That is, there is no need to separate the absorbed oil from the biochar for their end use, and the energies of both biochar and oil can be recovered. As results of these advantages, bioochar is likely a cost-effective absorbent for remediating spilled oil. II. Necessity for Activation and Newly discovered Method Absorption is a major technology for the remediation of spilled oil and contaminated water. Sorbentâ€™s absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbentâ€™s internal pore volume and surface area. Nguyen and Pignatello (2013) reported that biochar from hardwood has a lower absorption capacity than those of many synthetic absorbents. Thus, internal pore volume of biochar has to be increased. CO2 and water are usually used to burn a fraction of carbon in generating larger pore volume during activated carbon production. Such physical absorption usually employs a temperature in the range of 600â€“1200Â°C, signifying the energy intensity required for such activation process. Recently, the Sustainable Energy and Environment (SEE) group at the University of Mississippi (UM) developed a family of new methods for biochar activation that was conducted in the temperature range 65-70Â°C. The energy throughput for the activation is much lower than the traditional methods. SEE is able to achieve a 16-fold increase in internal surface area, from 12.9 to 1890 m2/g. This activation approach is simple and requires agents that are readily available everywhere. Moreover, SEEâ€™s low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biocharsâ€™ internal surfaces. Considering these benefits of energy consumption and those mentioned in the last section, the cost for such oil-absorption concept is likely to be highly competitive to the current remediation methods. III. Proposed Work The proposed work will include the following tasks. 1. SEE group will produce biochars from typical readily available biomasses in the Gulf States including rice husk, rice straw, switch grass, and hardwood under different conditions in our Combustion Lab. 2. SEE group will activate and characterize the biochars by using our novel activation and analytical methods, 3. SEE will optimize the variables for pyrolysis and treatments.		Yes	Yes	No	Yes	Yes	Yes	No		Yes		$ 300,000.00	$ -	develope product and create industry in MS
	Research and Education	4263	12/19/2014	Costal Workforce Development and Training	The Workforce GoTeam recommends developing a two-year marketing campaign focused on promoting workforce development and training in the three coastal counties of Hancock, Harrison and Jackson. The marketing campaign will help support the effort to develop and sustain a highly qualified workforce, as well as support the partnership efforts with the local school districts and high schools, Mississippi Gulf Coast Community College (MGCCC), Pearl River Community College (PRCC) and MDES WIN Job Center. The campaign will connect high school students, parents and the unemployed with the community college training programs and companies in need of a skilled workforce. Though informative, the campaign will concentrate on being persuasive in nature. It will focus on persuading residents in our target audiences that staying on the Mississippi Gulf Coast and taking a more immediate career path is not only acceptable, but also attainable. The benefits of being employed and remaining/living on the Mississippi Gulf Coast will also be touted in a visually and verbally compelling manner. A particular emphasis will be placed on high school students, their parents and their guidance counselors to convey the opportunities available through alternate education and training. The end result of the non-collegiate career path will be communicated by illustrating the promising future (highly competitive salary, job security, quality of life) these individuals face â€“ with the appropriate training. This effort will help level the playing field for college path and non-collegiate career path high school students, thus helping to decrease the dropout rate and increase the employment rate.		Yes	No	Yes	Yes	Yes	No	No		Yes		$ 2,000,000.00	$ -	
	Research and Education	4264	12/19/2014	Mississippi Aquarium	This project proposes a world-class aquarium to be built along U.S. Highway 90 in Gulfport, Mississippi on a total of approximately 18 acres of land overlooking the redeveloped Jones Park and Small Craft Harbor. Depending on features, shows, and exhibits, it could be as large as 130,000 square feet, and cost in the neighborhood of $120,000,000. This facility will serve to fill the void left by the loss of the Marine Life Oceanarium and provide for a much-needed family-friendly and education-oriented tourism facility for our Gulf Coast market. Unlike many projects that seek either full funding or have no stakeholder buy-in, this proposal has been in the works for some time, with the understanding by Gulfport city leaders that in seeking support, local commitment must be demonstrated to emphasize the significance of the shared vision of making this a reality. On December 2, 2014, the City Council unanimously approved obligating $14 million of City funds toward the purchase of approximately 10 acres of land to be acquired for this project site. When combined with the County Library and CTA properties, there will be roughly 18 acres for development as a campus for this project which has the potential to also include retail, restaurant, and lodging amenities. The appeal of this location is not only the scenic overlook, but the elevation itself is more desirable than at the waterâ€™s edge. It is important to note that this section of Gulfportâ€™s downtown remains under-utilized, undeveloped, and modestly blighted. From an urban renewal standpoint, this is a home run! Obviously, the economic benefit to Gulfport and the surrounding communities can be a game changer through increased tax revenues and site leases. The Gulfport Redevelopment Commission will have developmental authority over this project, and has taken a methodical approach to performing due diligence measures in order to achieve an accurate picture of what the potential for this ambitious development represents. To that end, David Kimmel, former Construction Project Manager and Executive Director of the Georgia Aquarium, has been hired as a consultant to assess options, reach out to industry contacts, and make recommendations to guide our progress. A market assessment is currently underway with the objective of confirming the range of customer draw, anticipated number of visitors, exhibit type, animal/species features, interactive attractions, physical plant requirements, square footage size recommendations and configuration, and ticket prices our market will bear. From a partnership standpoint, we have the commitment of the Harrison County Board of Supervisors to transfer title to a parcel of land containing the old Harrison County Library building adjacent to the existing campus. Coast Transit Authority has committed to developing that structure and the adjacent underutilized parking garage into a multimodal transit station, to include visitor information and pedestrian services, bicycle rentals, and bus stop access. In conjunction with the Mississippi Department of Transportation, they are also engaged in developing support for a pedestrian tramway/crosswalk over U.S. Highway 90 which would provide a much needed safety component for public access between the aquarium property and the Jones Park/Small Craft Harbor area. To further demonstrate the viability of this project, we have already received commitment from the private sector, with a developer desiring to build a minimum 200 room hotel in conjunction with the aquarium build-out. We have also had more than a passing interest from companies in the business of aquarium construction and operation that are at present performing their own market assessments for this project. We are seeking support from the State of Mississippi through bond proceeds, and have spoken to our Federal delegation about the impact this development could have. Finally, we anticipate developing partnerships with the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory and Mississippi Stateâ€™s College of Veterinary Medicine which will serve to greatly enhance the breadth of mission we expect this transformational facility to have. This project is consistent with at least four (4) of the eight (8) eligible requirements of the Restore Act and GoCoast 2020. The enhancements to tourism, workforce, infrastructure, marine research & education, and environmental stewardship through making Mississippiâ€™s Aquarium a reality will have generational economic development benefits and provide a cure for one of the most identified lapses in our Gulf Coast region â€“ family-oriented attractions - a component necessary to helping our region achieve Premier Tourism Destination status.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 120,000,000.00	$ 14,000,000.00	

	Research and Education	4272	12/23/2014	Stennis International Airport Aerospace Academy	HCPHC and Pearl River Community College jointly proposed to establish an Aerospace Academy at Stennis International Airport. With the proliferation of aerospace development in the greater Hancock County region, Stennis International Airport is primed to serve as home for Mississippi's Aerospace Academy. The academy will train the next generation of aerospace workforce in Mississippi and create a tremendous competitive advantage for the stat's aerospace development efforts.	Hancock	Yes	No	No	No	Yes	No	Yes	100	Yes		$ 2,000,000.00	$ -	
	Research and Education	4276	12/27/2014	Mississippi Coastal Heritage Restoration, Education, & Preservation Trail	Funding is requested to establish the Mississippi Coastal Heritage Trail (MCHT), a 100+ mile multi-use pathway linking coastal communities from Grand Bay National Estuarine Research Reserve to NASA's Infinity Science Center. While increasing public understanding and providing public access to natural resource interpretive sites, waterways, islands, and forests, this Trail will also provide an opportunity to educate community members and visitors about the effects of the Deep Water Horizon Oil Spill on Gulf Coast communities. MCHT will serve as an educational tool to teach about the interaction between humans and the marine environment as well as offer recreational access to a pedestrian/bikeway stretching across the historic and culturally rich Mississippi Gulf Coast. The MCHT will serve as the backbone of the physical network of cultural, historical and natural places where residents and visitors alike can connect with these places. Heritage Trails Partnership of the Mississippi Gulf Coast (HTP), highly supported by the National Park Service, is working to reconnect residents and visitors to the coastal ecosystems that surround them through recreational trails and conservation education projects. HTP is creatively fostering connections to education and tourism growth through trails and greenways while safe guarding the quality of coastal destinations. HTP has rallied all communities along the Mississippi Gulf Coast in a dialogue about creating a network made up of blueways and greenways where one did not exist. HTP's diverse Board of Directors, including community leaders of conservation, business, planning and health organizations, now leads the effort to create the Mississippi Coastal Heritage Trail (MCHT), recognized by the U.S. Department of Interior through the America's Great Outdoors Initiative. HTP has become a vibrant instrument for information exchange and building of interagency trust, related to trail projects, for the benefit of all coastal communities.	Hancock,Harrison ,Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78	Yes		$ 25,775,000.00	$ -	
	Research and Education	4277	12/29/2014	Highway 603 Corridor	Water quality is a tremendous factor in the growth of a community, impacting economic stability through tourism, property values, as well as access to recreation and locally-harvested food. Although water quality in the Gulf of Mexico is affected by many large water bodies, small scale improvements may have a positive effect on both the Gulf and within the local community by providing access to natural spaces and improving sites for fishing and swimming as well as increasing community resilience. Highway 603 is a major corridor to the community with high traffic speeds, long frontages, and loosely planned infrastructure. The low elevation of the roadway and its proximity to multiple water crossings causes multiple environmental and community resilience problems: poor water quality due to non-point source runoff, persistent flooding, low density land use, and ditches that occupy a large percentage of the right-of-way rendering alternative transportation path construction impossible. This project will analyze areas where improvements may positively impact water quality and community resilience along the Jourdan River and tributary waterways: Breath Bayou, Bayou LaCroix, Four Dollar Bayou, Edwards Bayou, and Bayou Talla. The project will set up a water sampling program to determine current issues such as: sewer concerns and effluent overflow, roadway and impervious surface runoff, or over-fertilization of lawns. This project will identify areas to address the problems identified: conserve lands in perpetuity, restore landscape filters for sediments and pathogens, intercept runoff, provide access to water and the natural environment, and connect with alternative transportation pathways. Water quality monitoring will also be performed after improvements to measure the changes, as well as the number of days the road is flooded per year.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 570,000.00	$ 20,000.00	
	Research and Education	4278	12/29/2014	Restoring the Ditch	A partly channelized ditch supplies a large amount of runoff into the Mississippi Sound and causes persistent beach closures in a very popular beach area. Although there is a low forested area adjacent to the drainage way, it provides limited ecological service for improving water quality. The geometry of the ditch is straight and direct, and it has steep sides, contributing sediment from erosion of the banks, and reducing the potential for settling and filtration during rain events. The extent of this mini-watershed extends past Central Avenue and the railroad tracks. Initially, the water quality (and quantity) will be monitored to determine the problem: is it animal waste, sewer issues, or other bacterial sources? We will work with the City of Bay St Louis Public Works and REACH, a program of Mississippi State University, to set up a water sampling program. The proposed project will then address the specific problems identified. Actions may include: repair lift stations, enlarge drainage space, introduce settling areas for sediment, and replant stormwater drains to filter other undesirable contents. Water quality monitoring will also be performed after improvements to measure the changes. The outfall is located in proximity to MDEQ Hancock County Sampling Station 04 [EPA:MS356172], which is frequently listed as water Contact Advisory as a result of high bacterial pathogen indicator levels.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 350,000.00	$ 20,000.00	
	Research and Education	4279	12/29/2014	Vacation Lane Restoration	A low wetland area consisting of forested lots which led to the Mississippi Sound was damaged during Hurricane Katrina. This area now provides limited ecological service for improving water quality and frequent beach closures. Current development pressures are low, but little has been done to replant fragmented wetlands or remove impervious surfaces. Outfall is located in proximity to MDEQ Hancock County Sampling Station 03 [EPA:MS594393] which is often listed as water Contact Advisory as a result of probable high bacteria levels. Because of the habitat damage, the wetland area and the lack of a healthy forest have decreased the protective aspects for community resilience for this site, for both incoming and outgoing flows of water. The first step will be to monitor the water quality (and quantity), to determine the problem: is it animal waste, sewer issues, or other bacteria sources? We will work with the City of Waveland Public Works, and REACH, a program of Mississippi State University, to set up a water sampling program. The proposed project will take action to address specific problems identified through: repair of lift stations, enlarging drainage space, removing construction debris and abandoned slabs, introducing settling areas for sediment, and replanting stormwater drains to filter undesirable contents. Water quality monitoring will be performed after improvements to measure changes.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		No		$ 320,000.00	$ 20,000.00	
	Research and Education	4282	1/2/2015	Classrooms and dormitories for the Center for Marine Education & Research (CMER) in Mississippi.	INTRODUCTION: The Institute for Marine Mammal Studies (IMMS) is a non-profit 501 (c) (3) organization dedicated to marine education, conservation, and research of marine mammals and sea turtles in the northern Gulf of Mexico. It operates a premier, state-of-the-art Center for Marine Education and Research (CMER) in Gulfport, Mississippi. It is the only facility on the Mississippi Gulf Coast that has the capability and expertise to care for sick and injured marine mammals and sea turtles while providing opportunities for marine education and research. IMMS serves as a liaison between public and private entities interested in marine mammal science and has partnered with the University of Southern Mississippi, Jackson State University, Louisiana State University, University of South Alabama, and the Mississippi Department of Marine Resources (MSDMR) to fulfill the state and federal needs regarding marine education, research, and response to and care of stranded marine mammals and sea turtles. IMMS also played a central role in the response to the BP oil spill in the northern Gulf of Mexico. Information on the programs and activities of IMMS can be obtained from its web site: www.imms.org REQUEST: IMMS proposes to construct dormitories and additional classrooms at the CMER in order to enhance research and educational programs and activities. This would allow IMMS to better collaborate with graduate students and scientists from the U.S. and abroad by providing inexpensive accommodation. IMMS works with nearby Universities and would like to expand its collaborative efforts to include other Universities in Mississippi which are located up to six hours away. The proposed dormitories would allow students and researchers from these Universities to contribute to the research efforts that are being conducted by IMMS in conjunction with MSDMR. Furthermore, it would allow us to house high school students from all over the state for educational camps, fieldtrips, and overnight activities throughout the year. This would greatly extend the educational outreach that IMMS is currently able to provide to the Gulf Coast and the State of Mississippi. The proposed project will not only benefit IMMS. It will provide additional support for MSDMR and the State of Mississippi by enhancing marine education, research, conservation, and instilling the importance of good stewardship in future generations. IMMS currently has the land and the necessary infrastructure (e.g., roadways, utilities, etc.) in place to start the project.		Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ 5,000,000.00	$ -	
	Research and Education	4291	1/5/2015	MS Gulf Coast Work-Ready Community Program	Resilient communities, coastal preservation, conservation, preparedness, recovery and sustainability within any geographical region are dependent upon a strong economy and thus a highly qualified workforce. In turn, a highly qualified workforce depends upon comprehensive, coordinated, integrated and regional workforce training programs. Such workforce training programs must provide a range of skills development opportunities beginning with basic competency and employment levels and culminating with recognized credentials. To meet the workforce training program needs of the Mississippi Gulf Coast region (Harrison, Jackson and Hancock counties), the Mississippi Development Authority (MDA), in partnership with Mississippi Gulf Coast Community College (MGCCC) and Pearl River Community College (PRCC), proposes the Mississippi Gulf Coast Work-Ready Community Program. The goal of the program will be to cultivate a more highly qualified workforce on the Mississippi Gulf Coast by creating a new and innovative workforce training program within the three coastal counties. The Mississippi Gulf Coast Work-Ready Community program will be an open-entry, competency-based exit program. Open to all coastal citizens, the program will place emphasis on developmental skills training (math, reading, writing), employability skills training (interview skills, resume writing skills) and skills specific to local/regional industries. A credential that is specific to the local/regional area and its industries will be developed and offered to program participants. The program will be designed as a â€œpathways program.â€ The training program and resulting credential will position participants to undertake multiple pathways upon program exit. Participants may enter employment, may enter subsequent workforce training programs or may enter other educational programs such as, but not limited to, credit-based career and technical programs at either MGCCC or PRCC. The proposed project aligns well with Mississippi Works, an economic development initiative of the Governor of Mississippi and the workforce development goals of the GoCoast 2020 Commission. All agencies within the Mississippi workforce development structure will be sought as program partners in order to achieve the necessary and comprehensive coordination that will be required to sustain the program and insure successful employment of program participants. The program will be developed over a six-month time period and deployed in ongoing training sessions within the three coastal counties over a two-year period. Specific objectives and desired outcomes are as follows. Objective 1: Creation of an open-entry, competency-based exit training program. Activities will include working with MGCCC and PRCC and coastal business and industry to develop and/or identify an industry-specific and recognized credential, identifying and developing curriculum and learning outcomes, identifying training locations, appointing industry partners to an advisory team and developing a recruitment and admissions plan. Job requirements for program staff will be developed and program staff will be hired as part of this objective. Outcomes of these activities will include the partnership of MDA, MGCCC, PRCC and industry partners, employment of program staff, curriculum and learning outcomes acknowledged, training locations identified, appointment of an advisory team and a uniform recruitment and admissions process. Objective 2: Implementation of the Work-Ready Community program. Activities for the implementation objective will include the hiring of instructional staff, modification of classroom and laboratory spaces, selection and purchase of training equipment, supplies and instructional materials, developing the instructional schedule, implementing the recruitment plan, the intake and processing of applications, acceptance of program participants and initiation of program instruction. Outcomes of these activities are qualified instructors, classroom and laboratory space is furnished and equipped,	Harrison, Jackson, Hancock	Yes	No	Yes	No	Yes	No	No		Yes		$ 3,500,000.00	$ -	create new curriculum
	Research and Education	4292	1/6/2015	Public/Private Training Partnership Program	The Mississippi Development Authority (MDA) proposes to establish a Public/Private Training Partnership Program to provide workforce training in Hancock, Harrison, and Jackson counties through state institutions of higher learning, community and junior colleges, and Workforce Investment Network job centers ("Training Providers"). Funds will be used to support high-impact workforce training partnerships between Training Providers and approved private companies, public entities, and not-for-profit organizations. The program will focus on college students and recent college graduates by providing internships and training opportunities with companies and organizations located in Hancock, Harrison, and Jackson counties. Workforce training under the program may include internship programs, occupational skills training, and educational training including workplace literacy, basic skills, and soft skills.	Harrison, Jackson, Hancock	Yes	No	Yes	No	Yes	No	No		Yes		$ 2,000,000.00	$ -	

	Research and Education	4293	1/8/2015	Pearl River Community College Hancock County Center	In an effort to meet the growing higher education, economic and community development needs of the citizens of Hancock County, Pearl River Community College desires to build a campus in the County. For a number of years, PRCC offered a limited number of college-level courses at John C. Stennis Space Center. As PRCC administrators searched for a more effective way to serve the area, the Hancock County Board of Supervisors and various citizens groups were also searching for ways to improve the County's higher education opportunities. Working with a coalition of governmental, education and community leaders, PRCC leased classroom and office space in a converted Wal-Mart on Highway 90 in Waveland. The new Hancock Center opened for the spring semester in 2005 and subsequently enrolled 193 students for the fall 2005 semester. Just ten days later, Hurricane Katrina's storm surge poured 8 feet of water through the building leaving it in ruins. Officials regrouped and classes resumed October 3, 2005, in portable classrooms at the Stennis International Airport. By January 2007, the newly-refurbished Hancock Center reopened and has served as many as 300 students per semester. The potential for growth is present, but a permanent campus-type facility is needed to foster this growth. The campus environment would promote program growth and the ensuing student population increases that are expected. Pearl River Community College proposes to build a free-standing campus on 20-30 acres of land in Hancock County. The facility would accommodate existing programs as well as those that are proposed for development to meet the changing economic climate in the County. The College's plan includes: (1) A classroom/administration building of approximately 50,000 square feet to house at least 20 classrooms; a library that would meet SACSCOC requirements; offices for business, admissions, financial aid and counseling services; a bookstore and small grill area and a large multi-purpose room that would serve as a meeting place for student and community groups. (2) A specialized building of approximately 22,000 square feet to house Career and Technical Education (CTE) Programs that would meet the needs of Gulf Coast and Stennis Space Center industries. (3) A maintenance building of approximately 5,000 square feet to house shipping/receiving functions as well equipment needed to maintain the campus. Cost of construction for the Hancock County Center campus is estimated at $15 million. This number is based on construction costs of $150 per square foot; road and parking lot construction; and, furniture and equipment. This project would greatly enhance the higher education opportunities for the residents of Hancock County and the Gulf Coast region and would be a catalyst for the economic and community growth of the broad Gulf Coast area.	Hancock	Yes	No	No	Yes	No	No	Yes	100	Yes	Higher Ed	$ 15,000,000.00	$ -	
	Research and Education	4296	1/8/2015	Mississippi Gulf Coast Fiber Ring	Currently, the Mississippi Gulf Coast lacks a comprehensive fiber network engineered to be survivable in the event of a natural disaster and to support limitless economic development. C Spire proposes to build a redundant, survivable fiber optic ring for the Mississippi Gulf Coast to provide both a backbone network for the Coast as well as fiber connectors to commercial and residential cores across the coastal region. This network would provide the infrastructure necessary to support economic development projects of unlimited size anywhere in this region and to provide fiber Internet connectivity for existing large, medium, and small businesses as well as coastal residents.	Hancock,Jackson, Harrison	Yes	No	Yes	No	Yes	No	Yes	100	Yes		$ 20,000,000.00	$ -	
	Research and Education	4297	1/8/2015	Gulfport Downtown Tourist Destination/Alley Streetscape - The Half Street Alley Project	Gulfport Downtown Tourist Destination/Alley Streetscape Project i.e. â€œHalf Street Alley Projectâ€ In the tradition of Printers Alley in Nashville, Pirates Alley and Exchange Place in New Orleans, and the Alley Station in Montgomery, AL., Gulfport, MS is seeking to develop the downtown alley between 26th Avenue and 27th Avenue into a true outdoor public entertainment and arts destination. Currently used for utility and waste removal purposes, the alley has received a design study by Tom McGilloway of the firm Mahan Rykiel Design, Baltimore, MD and Randy Wilson of Community Design Solutions, Columbia, SC., the nationâ€™s leading â€œNew Urbanismâ€ Alley Redevelopment designers. The team has repurposed and designed alleys in New York City, Austin, TX, Seattle, Portland, Chicago, and Atlanta and are now focused on opportunity in Gulfport, MS. Their assessment is that the location in Historic Downtown Gulfport will have a transformational effect in the heart of the entertainment district, creating a safe, attractive and highly desirable appeal to the character of downtown. Major design queues will be to streetscape the surface with new brick pavers, drainage systems, arched signage at each entrance, various and eclectic lighting treatments, creative and unique art installations and displays, bamboo planters, benches and seating areas and dedicated areas for the restaurantsâ€™ outdoor dining areas. Also, to address a balance of utility and desirability/sanitation, the current 40-yard compactor in the alley will be replaced with a small dumpster corral that will attractively fence off four 2-yard size dumpsters that will be on casters providing ease of access for Waste Pro to remove-dump-replace the containers on a daily basis. Based on recommendations and having the endorsement of the local Director of the Department of Health, the corral area will be against one of the alley walls, fenced off on a concrete pad with sewer drainage and hot and cold water for safe clean up and maintenance of the area. This new attraction will directly increase traffic in this pedestrian friendly area to 6 locally owned restaurants that will have back door and/or courtyard access to the newly transformed â€œHalf Street Alley. The Gulfport Main Street Director will be responsible for providing outdoor dining area events, public art displays, poetry readings and musical entertainment. It will also allow for the development of new small businesses in our downtown area by creating a new synergy of art and entertainment. Currently, the alley is an eyesore, a health and safety hazard, and quite possibly the worst maintained area in all of Downtown Gulfport. With the development of â€œHalf Street Alleyâ€ not only will we correct and clean up a blighted area, we will create a destination that young and old will be able to visit to view public art contests, eat, drink, be entertained and most importantly, be proud of the continued growth and rebirth of Downtown Gulfport. To accomplish the transformation of the alley, Gulfport has dedicated approximately $317,000 from CDBG monies from the Mississippi Development Authority to the above ground alley project which would include lighting, street pavers, electrical. To complete the project, we are seeking an additional $350,000 to replace the aging sewer infrastructure that runs the length of the alley, engineering costs, concrete replacement and other infrastructure needs. This funding would complete all the necessary below ground infrastructure in order to complete the project properly the first time. Currently, there are 33 locally owned restaurants and entertainment establishments that are all and small businesses that have opened or renovated and reopened since Hurricane Katrina. The City has used over $10 Million in CDBG for one of the nationâ€™s largest streetscape and faÃ§ade grant projects resulting in a resurgence and rebirth of Downtown Gulfport. The â€œHalf Street Alleyâ€ Project is the project that will differentiate Downtown Gulfport from any other along the coast, offering a true destination that attracts more patrons to our small businesses, improves a currently depressed area and creates a unique public space tourist and locals alike will be drawn to.	Harrison	Yes	No	Yes	Yes	Yes	Yes	Yes	55	Yes		$ 1,500,000.00	$ 317,000.00	
	Research and Education	4298	1/8/2015	ONE COAST Scenic By-ways and Relocation Campaign	It is recommended that $2,019,250 in Restore Act Funds be utilized to launch a ONE COAST Scenic Byways and Relocation Campaign to drive tourism and real estate sales. A decade in the making, Beach Boulevard in Hancock County, is the only shoreline along the MS Gulf Coast that has received the designation as a Mississippi Scenic By-way. The vision for a scenic byway did not stop at the 13 miles of shoreline in Hancock County. The 30 miles in and around NASAâ€™s Stennis Space Center buffer zone, an untouched natural green space that can never be developed , is now part of the By-ways to Space. The buffer zone---a natural haven for birding, biking, fishing, camping and exploring---is not only a national asset for homeland security and defense, but also for the emerging new eco-tourism product of the Mississippi Gulf Coast. Work is underway now to connect the beach boulevard by-way to the rest of the Gulf Coast by naming Highway 90 in Harrison and Jackson counties as Scenic By-ways, to celebrate the 100th Year Anniversary of the Old Spanish Trail. During 2015, the by-way will extend into Harrison County up to Debuys Road. There is interest from Jackson County leaders to extend the by-way there and in Biloxi, segmentation may be required to carve out the Casino Districts. A Mississippi Scenic Byway designation can benefit a community in several interrelated ways: Resource protection; Community recognition as a source of pride; Economic development/tourism through visitor kiosks, vista spots to serve tourists; Community visioning to address roadway corridors and land use issues; Partnering by bringing individuals, land owners, the public and private sector to partner for betterment of the community; Access to federal and state grants, trusts, loans and assistance programs for safety improvements, facilities, improvements to access areas, protecting historical and cultural resources. The mission of the Mississippi Coastâ€™s two new scenic byways is to preserve, enhance, protect and promote the natural, historic and cultural tourism intrinsic values of 62 miles of scenic roadways for the enjoyment and education of the American public. The goal of the scenic by-ways programs is to introduce the Byways to Space and the Beach Boulevard Scenic Byways to the public by: -Taking advantage of the INFINITY Science Center, a Mississippi Tier I tourist attraction that opened in mid April 2012 that has a focus on the science of land, sea, and outer space. -Using the Byways to Space and the Beach Boulevard Scenic Byways, and the intrinsic resources along these byways, as an â€œoutside laboratoryâ€ where people can have a hands-on experience with what they have learned about inside the INFINITY Science Center. -Providing electronic and static information to the public to plan their visit to the byways, to actually guide the public around the byways, and to provide visitor information at various locations on the many intrinsic resources located along the byways. -Involving the public in the potential expansion of the byways to provide more of a seamless visitor experience. Promoting the cultural and heritage tourism of the area is the catalyst needed to increase visitation, new business income, tax revenue and jobs for the region, using the INFINITY Science Center as the mechanism to draw the estimated 300,000 annual visitors off the Interstate and into the communities surrounding the Center. Connecting the Scenic Byways to Space to the Beach Boulevard Byway will draw the visitors from the Interstate into the cities of Waveland and Bay St. Louis and ultimately across the Coast as a preferred tourism route, thereby generating tourism activity throughout the	Hancock,Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes		$ 2,019,250.00	$ -	
	Research and Education	4299	1/9/2015	Mississippi Gulf Coast Business Resource Centers	Mississippi Gulf Coast Business Resource Centers Entrepreneurial support is one of the keys to positioning communities for economic success in tough times. With the economy struggling to get back on track following Katrina, the Gulf Oil Spill, Isaac and the recession, there was and still is a need to fuel the small business engine by giving entrepreneurs and companies the support they need to re-open their doors, recover, expand and hire more workers. When the Deep Horizon Oil Spill hit, the Hancock Chamber of Commerce was poised to launch the business resource recovery center, using the Katrina model as a template. In the aftermath of Hurricane Katrina, the Hancock Chamber of Commerce was on the ground immediately providing technical assistance to businesses. Through a Gulf Oil Spill Grant grant from the Economic Development Administration, the Hancock Chamber of Commerce together with the Hancock Community Development Foundation and the City of Bay St. Louis established a Regional Business Resource Recovery Center (BRRC) for the Mississippi Gulf Coast and managed the center from July 2011 â€“ December 2013. In 2013, the Hancock Chamber was awarded the Community Economic Development Award for this program by the Mississippi Economic Development Council. The center has now become dormant due to lack of funding. Through this proposal, we recommend that a total budget of $8.4 million be allocated from the Restore Act Funds to fund a Mississippi Gulf Coast Business Resource Center Program. Using the Hancock Chamber Model, we propose to Develop a Small Business Task Force & Business Resource Center in each county, using existing Chambers of Commerce to bring all key stakeholders together to: Stabilize local businesses; Stabilize jobs and incomes for individuals; Stabilize community structures; Rebuild community, business and consumer confidence; Set targets and timelines; and, Identify existing plans and resources. We also plan to target specific challenges: Business retention & expansion;	Jackson, Hancock, Harrison Counties	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 8.40	$ -	
	Research and Education	4300	1/9/2015	Creation of Pearl River Community College Campus in Hancock County	Create a campus for PRCC in Hancock County for seafood research and aero space technology. This is of utmost importance, not only for the Mississippi Gulf Coast but for the state at large. We need to develop our workforce in Hancock County.	Hancock	Yes	Yes	No	Yes	Yes	No	No		Yes		$ 15.00	$ -	

	Research and Education	4302	1/16/2015	Oil Spill Aftermath Assesement on Asian American Communites	During the influx of Vietnamese refugees throughout the 1970s and 1980s, Vietnamese families migrated to the Mississippi Gulf Coast to work in the seafood industry. They started to work in Biloxi's seafood factories as oyster shuckers and shrimp packers. Some Vietnamese familiar to commercial fishing in Vietnam became successful as shrimp boat captains and deckhands. Now, Vietnamese fishermen make up almost half of the state's commercial fishermen in Mississippi. The Vietnamese American community's population increased to more than 8,000 from Census 2010. These include several towns like Pass Christian, Biloxi, Gulfport, D'Iberville, Ocean Springs, Gautier and Pascagoula. Majority Vietnamese households in the South Mississippi depend on the seafood industry, and 2,000 Vietnamese individuals are directly employed by the seafood industry as commercial fishermen, seafood factory workers and distributors. The BP oil spill had an extraordinary destabilizing effect on human communities in Mississippi particularly the lower three counties, Harrison, Jackson, and Hancock. The stress and strain is evident among the Asian Americans community financially, environmentally, culturally, socially, and psychologically. These communities are most dependent on commercial, subsistence, and recreational harvesting of natural resources 7 / 10 from the Gulf of Mexico, and thus were particularly vulnerable to the disruption caused by this disaster. The social fabric of our community is slowly falling apart following the spill. This impact comes mostly from uncertainty about the future, fear of food contamination, the chaos of the cleanup, lack of job opportunities, and the ongoing collapse of the seafood industry. In response, AAC took the frontline and started mobilizing Vietnamese fishermen on the Mississippi Gulf Coast. As the oil spill turned to an environmental and economic disaster, we came together to document the needs of our community and to advocate and establish the appropriate solutions. Asian Americans for Change would like to propose an oil spill aftermath community assessment on the Asian American community working and living in the lower 3 counties. Also included other minority community as well. Hancock, Harrison and Jackson county. The goal for a community assessment will beneficiary to many. Allowing a more accurate data collection and helping bridge the communication gap. Also allowing to pinpoint where the problems are in the community. Therefore, this will also allow Asian Americans for Change, local organizations, state organizations, national organizations, state agencies and federal agencies to accurately propose projects in problem areas and allow the correct resources to be accessible. It is important the methodology for assessing the community is not limited or restricted. Every approach will be taken into measure. Data and Interviews collected will be recorded and documented for further analysis. Approached participant must be willing and able to perform the interview. Interview methods are as follow: 1. Direct approach in the field. 2. Cold calling potential participants. 3. Relying on post participants to refer new participants. 4. Attending community gatherings, events and meetings. 5. Securing and setting up interviews with participants. 6. Interview known family members and friends who were affected by the oil spill.		Yes	Yes	No	No	No	No	No		No		$ 90,700.00	$ -	Community interviews
	Research and Education	4303	1/20/2015	Project Management in Support of MS RESTORE and NFWF Projects	Just as an integrated ecosystem monitoring and modeling network is critical to understanding the interconnected Gulf ecosystem, it is also critical to design, develop, and implement this network as a Comprehensive Integrated Project. A detail Project Management Plan will be prepared from all the individual proposals. Project Management Principals and Procedures are an ideal way to ensure that the execution of this science based system is successful and served the needs of the resource management, regulatory and emergency response community (hereinafter referred to as decision makers). The project will follow a modified spiral development approach, where each proposal will represent a spiral. Figure 1 in the following attachment, highlights the complexity due to the number of organization performing research and implementation of funded projects in the Gulf. A large effort of coordination between all developing organizations will be required to minimize unwanted duplication. Table 1 in the following attachment, provides the basis for the starting requirements for the observing system, and forms the project management basis for all further actions. A Requirements Traceability Matrix (RTM) will be established and maintained throughout the design, development, testing, and implementation phase of each spiral. A key component of the Project Management Plan will be defining how the large amount of data being collected will be managed, and what information products derived from those data are needed by decision makers. Deep Water Horizon once again highlighted the need for a better understanding of the environment and ecosystem making up the Gulf of Mexico region. Many agencies, at all levels of government, universities, NGOs, and industry are more involved in understanding the complex environment of the Gulf. Resources from the penalties from the oil spill are being provided to NFWF, NAS, and the RESTORE Act and other for the restoration of the Gulf. These programs will generate large amounts of environmental data and information. These funding sources will direct how these data and information are to be managed. Each recipient of funding will be required to manage their data in accordance with the funderâ€™s policy. Working with NOAA and Restoration Council funders, plan to develop a Data Management Policy and Procedures for managing all these collected data. All data collected under these funding initiatives have to open and free to the public. These data have to be discoverable and accessible to users. These data have to be preserved for future generations. This Project Management Plan will define all the Data Policies and Procedures needed for all these data types collected. It will be the responsibility for each of the funded proposals to actual process these data to the Project Management Plan direction. As part of the Project Management Plan, project personnel will interact with NOAA, the EPA, the MS-DEQ and MS-DMR to ascertain what information products, or decision support tools, would be most useful to them from the subproject monitoring data in the Gulf of Mexico. Where possible with existing resources these tools will be developed. If more resources are required, the development of these tools will be recommended for future funding.	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 2,000,000.00	$ -	monitoring and Data Synthesis
	Research and Education	4305	1/26/2015	A Hancock County Aerospace and Workforce Academy	Aerospace is a staple on the Mississippi Gulf Coast, despite the lack of comprehensive aerospace and industry-related training programs from both the academic and workforce training perspectives. The Pearl River Community College (PRCC), which services Hancock County, and the Hancock County Port and Harbor Commission (HCPHC) have the will, need and wherewithal to make such a comprehensive training program a reality. With PRCCâ€™s existing academic and workforce training acumen and HCPHCâ€™s land strategically located on the Stennis International Airport airfield, a very successful partnership can be formed, if it is supported by Restore Act Funding in an estimated amount of $10 million for constructing a multipurpose 43,100 sf. facility and related parking, apron and taxiway and an estimated $3.1 milion for a three-year operational start-up period. Hancock County, which is home to Stennis Space Center and Stennis International Airport, has robust aerospace activity in both the private and federal sectors with twelve industries in the private sector alone, and coast wide there are 25 aerospace industries, with an untold amount of smaller support business with industrial training needs. While there is strong sector activity, lacking are the components that would create a true industry cluster and a major factor in cluster development is the existence of a universities and colleges supportive of that activity. Once a strong industry cluster is in place, synergies are created that are hard to easily duplicate in other regions. PRCC and HCPHC wish to enhance the Gulf Coastâ€™s existing competitive advantage with the creation of an aerospace and workforce academy that would provide the academic, workforce training, and networking components that weave the threads of synergy even tighter for aerospace in Hancock County.	Hancock	Yes	No	Yes	Yes	Yes	No	Yes	15	Yes		$ 10,000,000.00	$ -	similar to ID
	Research and Education	4313	2/3/2015	Mississippi Maritime Museum	As early as 1700 the chronicling of vessels being built on the Pascagoula River began, and in the 300 years of documented building records since that time, thousands of vessels from shrimp and fishing boats, ships, luxury liners, barges, cargo carries, research, supply and military vessels as well as off shore drilling structures have been constructed in whole, or in part, in the waters of the Mississippi Gulf Coast. Jackson County is Mississippi's largest tonnage Port, home to one of the nation's largest oil refineries, Ingalls/Northrop Grumman Shipyard and one of the National Oceanic and Atmospheric Administration's research labs. To insure that the maritime history is passed along to this generation and the next, a group of Pascagoula residents organized to establish a museum to tell the story of our maritime history and the importance of our water ways to the Mississippi Gulf Coast. The Mississippi Maritime Museum, Inc. (MMM) was formed in 2007 and since its inception the group has worked diligently to streamline its efforts by developing a Board of Directors, committees, an operating plan, establishing a 501 (3)c organization and writing by-laws. The MMM Board's primary mission is to preserve, educate, promote and exhibit Mississippiâ€™s maritime history for the present and future generations. In March of 2013 the MMM purchased two buildings on DuPont Ave that were formerly part of the Pascagoula High School. The MMM Boards primary goal was to have a fully functioning maritime museum by 2016-17. The larger of the two buildings will be the future home of Mississippi Maritime Museum, while the smaller building will serve as a workshop and preservation area for museum materials. A preliminary museum design for the Math & Science building has been developed with the help of Mississippi State University School of Architecture and an estimate cost to renovate that building is 1.5 million with another 1.0 million for display cases, exhibits, models, movie on maritime history, etc. Bringing a permanent maritime museum to fruition would not only preserve our maritime history but would benefit the Gulf Coast community by: 1) Increasing tourism along the Mississippi Gulf Coast, 2) Create jobs for local citizens during construction and long term jobs for museum staff, 3) Increase revenue to local hotel, restaurants and retail stores in Jackson County, and 4) Education: Enhance knowledge of the benefits of Maritime Related Industry to Mississippi youth.	Jackson	Yes	No	Yes	Yes	No	No	Yes	0.01	Yes		$ 2,500,000.00	$ 25,000.00	
	Research and Education	4319	2/20/2015	Requirements Analysis and System Architecture Definition for an Operational Ocean Observation and Modeling System	The Gulf of Mexico living coastal and marine systems are experiencing stress from man-made disruptions including the Deepwater Horizon incident and natural phenomena, including severe storms, sea level rise, coastal depletion, hypoxia and compromised water quality. Decision makers have not been afforded with the actionable information and knowledge needed to make well informed decisions in interest of the public and the associated businesses and industries along the Mississippi Gulf Coast with regards to short and long term coastal management. Apparent in recent man-made and natural disasters is the inability to predict the effects of these events due to the lack of in-situ sensors, ability to assimilate data from all sources and modeling the effects of these events in a timely manner. Two prominent examples are the case of Deepwater Horizon, the ability to rapidly forecast the direction of the spill and Hurricane Katrina, the ability to accurately predict storm surge. Also, resulting from Deepwater Horizon was the need for baseline environmental conditions. In order to respond to these anthropogenic and natural disaster in both tactical and strategic time scales, is an operational center inclusive of comprehensive sensing, modeling and forecasting capability and the associated infrastructure along the Gulf of Mexico, specifically the Mississippi Gulf Coast, to adequately respond to these environmental conditions occurring at temporal scales from hours to decades and spatial scales from meters to kilometers. Proposed is to document requirements for a sustained operational center, from observations to decision products, and develop and end-end Concept of Operations (CONOPS) for MS RESPONSE. This would be based on requirements from all stakeholders to include, but not limited to, the Mississippi Department of Environmental Quality (DEQ), Department of Marine Resources (DMR) and other local, state, and federal. From an economic development perspective, â€œBlue Economyâ€this will include industry located on the Gulf Coast and outside will be interviewed to determine requirements for a test-bed that would attract industry to locate on the Mississippi Gulf Coast. Federal Agencies will be interviewed to determine their requirements, including test-bed and range requirements. This will include but not limited to Office of Naval Research (ONR), Commander, Naval Meteorology and Oceanography Command (CNMOC), Naval Oceanographic Office (NAVOCEANO) and National Oceanographic and Atmospheric Administration (NOAA). It is fully recognized this is not a complete list and once work is initiated many stakeholders will be added and interviewed. Based on all assimilated requirements a CONOPS for MS RESPONSE operational center will be developed. This will be an all-inclusive end-to-end system of sensing and modeling requirements, IT architecture, specific sensors, optimal sensor locations, communication pathways, and shore facilities. The CONOPS will be made scalable according to requirements and estimated long-term sustainment funding availability. The deliverable will include a complete analysis of the derived benefits of bringing industries and jobs to Mississippi Gulf Coast by implementing recommendations.	Hancock,St Tammany,Mobile ,Jackson,Harrison ,Jackson	Yes	No	No	No	Yes	No	No		Yes		$ 1,475.00	$ -	
	Research and Education	4329	3/5/2015	Neotropical Migratory Songbird Preserves for the Mississippi Coast	The Mississippi Gulf Coast is important habitat for trans-Gulf neotropical migratory songbirds. The habitats immediately along the Mississippi Sound are the first terrestrial habitats the birds reach flying north in the spring and the last terrestrial habitats they see when flying south in the fall. Restoration of maritime forests with a plethora of fruit-producing and insect-harboring species would provide important food resources for migrating songbirds.	Harrison,Jackson, Hancock,St Tammany,Mobile	Yes	No	No	Yes	No	Yes	No		No		$ 250,000.00	$ -	

	Research and Education	4330	6/1/2015	Fishing Industry Educational Outreach	The fishing industry along the Mississippi coast, commercial and recreational, is one of the largest contributors to the local economy, with nearly $250M in sales and representing 5550 jobs (2011 statistics). In general, quotas within the various State-regulated and Federally-regulated fisheries are antiquated, with the result of extremely conservative quotas. There is an effort by the Mississippi Department of Marine Resources (DMR) to update those quotas based on more scientific methods than used in the past. Once new quotas are in place, there is an opportunity to educate local fishermen on theses quotas and the reasons behind them. Increasing their understanding of the process and the results is expected to assist in adhering to new quotas and to establish a collaboration through which other scientific results can be communicated. The Mississippi Enterprise for Technology (MSET) was recently awarded a grant from the Small Business Administration (SBA) for a Marine Industries Science and Technology (MIST) cluster. The award was made under the SBAâ€™s Regional Innovation Cluster (RIC) program to assist in the growth of small businesses involved in marine science and technology (S&T) along the Gulf of Mexico coast. This proposal under the RESTORE Act would provide an educational outreach mechanism for the MIST cluster and DMR representatives to interact with the local commercial and recreational fishing industry. The main focus of this interaction would to educate the fishing industry on rules, regulations, and quotas, as well as how these were derived and how they will help support sustainable fisheries. In many cases, fishermen are only afforded the final results (quotas) for various areas. It is felt that more knowledge of the processes and the results will provide a better understanding of the established quotas and how they support sustainability. The team for this proposed project is MSET personnel in conjunction with DMR personnel. The project plan is to create a series of meetings convening members of the fishing industry. In the first year, three meetings in each of the three coastal Mississippi counties are planned. The first will be an introductory meeting explaining some of the existing rules, regulations, and quotas and the reasons behind them. Feedback will be accepted on the most pressing issues associated with quotas, or perhaps other aspects of the industry. Meetings two and three will address questions posed in the first meeting, present updates on quota assessments, and present other pertinent information to the industry. MSETâ€™s MIST is planned as a sustainable collaboration, continuing even after the contract performance period. It is expected that the collaboration with the fishing industry will continue through Tideland funding, funding from the industry members, or other mechanism.	Hancock	Yes	Yes	Yes	Yes	No	No	No		No		$ 70,000.00	$ -	
	Research and Education	4332	3/5/2015	Biloxi Flats - Tchoutacabouffa River/Tuxachanie Creek Watershed & Gulf Coastal Plain Savanna Restoration - De Soto National Forest	The southeast corner of De Soto National Forest encompasses part of Harrison and Jackson counties in southern Mississippi. This area of the Forest contains the headwaters of the Tchoutacabouffa River/Tuxachanie Creek Watershed. This watershed drains into the Back Bay of Biloxi and is a vital part of the Mississippi Gulf Coast, influencing both water quality and coastal plain wildlife habitat. Within the Tchoutacabouffa River Watershed there is an area now known as Biloxi Flats. Biloxi Flats encompasses 2,500 acres of coastal plain savanna in need of restoration. Bayou Billie drains a significant portion of Biloxi Flats. This area once contained suitable Mississippi sandhill crane habitat, as evidenced by records of crane sightings and nests on National Forest land. Habitat on the nearby MS Sandhill Crane Refuge is well maintained by the US Fish and Wildlife Service, but the dense pine woods now found in the Biloxi Flats area are unacceptable nesting, roosting, and feeding habitat for cranes. Fire suppression, pine plantations in low areas, draining of land and nearby development have changed the historic vegetation structure. Stands of pine trees and thick underbrush now occupy what was once open gulf coastal plain savanna. Restoration of coastal plain savanna will promote recovery efforts for this species and provide habitat for many plants and animals (e.g. orchids, pollinators, crayfish) that depend on the existence of this ecosystem type. Ecosystem restoration work will also ensure consistent management across the landscape by aligning the Forest Service with the US Fish and Wildlife Service as both agencies work toward restoring and maintaining the connectivity of habitat utilized by the Mississippi sandhill crane. Longleaf pine rises in Biloxi Flats will also be restored and maintained in healthy condition to complement the savanna. Pitcher plant bogs and flats will be restored throughout Biloxi Flats and the rest of the Tchoutacabouffa River/Tuxachanie Creek Watershed as funding allows. Restoration, thinning, and prescribed burning are part of the short and long term management plans for the entire watershed. Installation of interpretive signage and significant trail improvements will be completed in the Tchoutacabouffa River/Tuxachanie Creek Watershed to educate the public on the principles and practices of ecosystem restoration and provide better opportunities for recreation. Signage will also educate forest users about sensitive plant and animal species as well as threats to ecosystem health.	Jackson,Harrison	Yes	No	Yes	Yes	No	Yes	No		No		$ 3,038,000.00	$ -	
	Research and Education	4336	3/9/2015	Stabilize Downcutting Streams in the Upper Jourdan River watershed	The main streams that make up the upper Jourdan River watershed are continuously downcutting. This is certainly true of Hickory Creek and White Cypress Creek. It no doubt applies to Catahoula Creek, but I have no personal knowledge of this one. This means that each stream has a headcut that is working it's way upstream and is converting a stable e type stream that is connected to its floodplain to an entrenched one that goobles up soil during floods, as it disconnects from its floodplain. Moreover, every stream and drain that goes into them also necessarily exhibits the same phenomenon as it cuts down at the same rate. The resulting soil loss ripples through the entire watershed and into the Mississippi Sound. Inland, wetlands (floodplains) are lost and hydrology of surrounding soils is altered. Vegetation is lost. All the streams mentioned have county road crossings that will be threatened in the not too distant future. In the marine environment, the extra siltation affects oyster beds and grass beds, thereby taking a toll on the fishery and oyster resource. It was interesting to note that one the tables in the breakout session of the marine resources meeting in Bay St. Louis on Feb. 26 had people around it who fish Bay St. Louis. They complained of their fishing spots getting silted up. At that same meeting oysters came up at table after table as a key cultural resource for the Mississippi Gulf Coast. I would advocate a project, assuming landowner cooperation, to stop head cuts in the affected streams, as well as possibly add grade control structures along the way. Although it's possible to spend a lot of money doing this, it need not be the case. There are techniques involving concrete rubble and ground stabilization cloth that have been shown to be effective.	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	
	Research and Education	4337	3/11/2015	Back Bay Biloxi Shoreline and Habitat Restoration	Project will restore shoreline area, ensuring growth of emergent plants including Spartina, Juncus, and other grasses and trees that have been lost to erosion. Several acres will receive remediation and land will be extended to include a narrow beach that has been lost due to increased force of wave action. The select means of restoration will improve conditions for more than a dozen endangered species in the area as shown in this proposal.	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	health & s	$ -	$ -	
	Research and Education	4343	7/24/2015	West Jackson County Constructed Wetlands Restoration Project	The West Jackson County Constructed Wetlands Treatment System was established in in 1990 to treat the centralized wastewater collected in western Jackson County, Mississippi. As wastewater passes through multiple cells of wetland vegetation, excess nutrients, heavy metals, and other environmentally harmful contaminants are removed from it prior to release into Costapia Bayou. In addition to wastewater treatment, the wetlands are a favored habitat for a variety of wildlife and serves as a complementary habitat to the adjacent MS Sandhill Crane National Wildlife Refuge. Due to the concentration of birds in these wetlands, we formed an agreement with the National Audubon Society to open the facility for avian observation and counting every Thursday. For the last several years, the wetland vegetation has been decimated by the invasive apple snail. Apple snails are a serious threat to freshwater wetlands and estuaries worldwide, with severe damage documented along the Gulf of Mexico coast. Consumption of wetland vegetation by the apple snail has led to drastic reductions in the wastewater treatment efficiency and wildlife habitat. The main objectives of this proposal are to restore the functionality and habitat provided by this treatment wetland through eradication of the apple snails and restoring of vegetation. The Jackson County Utility Authority has begun efforts to remove apple snails under monitoring by the MS Departments of Environmental Quality and Marine Resources. However, limited resources have hampered these efforts. We would like to expand upon these activities by researching and implementing the best methods for removing apple snails, followed by replanting of the wetland vegetation using peer-reviewed methods to maximize habitat and water treatment. Throughout all steps in this project, water quality, percent coverage of vegetation, and snail abundance will be quantified to determine the benefits of restoring this wetland. We will also implement outreach activities by using this site as a demonstration and education project that will be open to the public, for guided tours, on select days. The expected outcomes from this project are preservation and restoration of wetland habitat, increased wastewater treatment efficiency, improved water quality, significant contributions to knowledge base for the control of apple snails, and workforce development through hiring and training of new employees to address this problem and funding graduate research.	Jackson	Yes	No	Yes	No	Yes	Yes	Yes	62	Yes		$ 650,000.00	$ -	
	Research and Education	4348	4/13/2015	Lady Fab Trio (travel, higher education, and health management)	The â€œNHR Blueprint Foundationâ€ is a 501c3 non-profit organization working to address the specific needs and problems associated with young women. Established in 2013 in Diamondhead, MS, with the business office in Gulfport, MS, our mission is to aid our community in launching eradication of disparities amongst women. We aim to emphasize encouraging young women to stay in school, pursue entrepreneurship and travel, and be fabulous! Our goal is to encourage young women to pursue broader horizons in career and travel, including obtaining passports, dressing for success, higher education, health management, and free enterprise. Our vision is to spearhead a generation of young ladies more cognizant of opportunity, healthy living, and the benefits of versatile travel. We hope to connect with every community from the Gulf Coast to Jackson to encourage the attitude â€œdonâ€™t view me as a princess, see me as President!â€ In staying keeping with our goals of travel, higher education, and health management, the Lady Fab Trio encompasses three programs: Operation Worldly Girl, Heart Beat to the Beat, and Medical Room Ready. â€œOperation Worldly Girl (OWG)â€ is a program that will assist high school female juniors and seniors in receiving passports and acquiring knowledge of foreign opportunities, and bring that experience back to benefit the state of Mississippi. We will contract with the local passport office to have staff on site to process selected young ladies. The event will embody guest speakers that will introduce ladies to study abroad opportunities, internships, summer and senior trips. Though the initial phase will only promote travel to the Caribbean and Canada, the goal is for OWG to become an annual program that will enlist representatives that will provide young ladies with opportunities in Europe and Asia. OWG will offer many fun and informative programs catering to young women. This includes guest speakers, workshops, games, international foods luncheon, dress for success make-overs, demonstrations, and many other activities. We will provide accommodations for our guest speakers, honorarium, certificate of completion for the young ladies, passport photo taken onsite, and processing of passports. This program will be offered free to local high school juniors and seniors, with prequalification/selection prior to the event. OWG, with food and activities for young ladies of the Gulf Coast Region, will allow us to put on a program educating girls on disparities, self-esteem, diversity, and entrepreneurship. â€œHeart Beat to the Beatâ€ (HB2B) is a cardio dance workshop seeking to identify past attitudes and behaviors regarding exercise and diet in mothers and their daughters. We will seek to identify historical aspects of family exercise and meal planning in Harrison, Jackson, and Hancock County, MS. With the onset of popular tv programs such as BRING IT and SO YOU THINK YOU CAN DANCE, HB2B will provide a one day cardio dance camp, instruction on how to implement the cardio into a daily routine, heart healthy lunch, and awards ceremony with certificate of completion. Instructors from the Purple Diamond Dance Team, as seen on TV, will lead the workshop. We seek to evaluate overall physical activity, and to identify mothersâ€™ goals for the future health of their children. The learned results will be compiled and analyzed, and used as evidence based literature for the eventual development of a target program. Though only secured enough donations to hold HB2B once, our wish is to make it a quarterly event, because the popularity and response was TREMENDOUS, and we had to turn many young ladies away. â€œMedicine Room Readyâ€ (MRR) â€“ In recognizing that not every young lady is meant for a university tenure, but still would like a career, we would like to introduce MRR. MRR is a program that will be offered to high school academically inclined students to pursue and receive their LPN certificate upon graduation. This has been implemented in various high schools throughout the US, but		Yes	No	No	No	Yes	No	No		Yes		$ 750,000.00	$ -	

	Research and Education	4353	4/17/2015	Wolf River Preserve Restoration	Wolf River Preserve Restoration (estimated budget- $451,500): Wolf River Preserve is a 2,426-acre area protected by the DMR that contains expansive tidal freshwater and brackish marsh along the lower Wolf River, DeLisle Bayou, and Bayou Portage. DMR has identified the need to restore a natural hydrology to much of the Preserve, which is affected by unused logging roads and other barriers to natural sheet flow. This project will restore natural stream function and freshwater flow to 400 acres of estuarine and freshwater wetlands impacted by now defunct logging roads, in cooperation with the DMR. Restoration strategies include installing culverts at appropriate elevations to restore natural stream flow, installing low water crossings or removing unused logging roads to restore natural sheet flow across coastal plant communities, and replanting restored areas with native wetland vegetation. Stewardship activities will be developed with the DMR and the Mississippi Wildlife Federation to host volunteers from the Mississippi Habitat Stewards Program.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 451,500.00	$ -	
	Research and Education	4359	4/29/2015	Moored Observations in the Mississippi Bight: Environmental Monitoring System	The Central Gulf of Mexico Ocean Observing System (CenGOOS) was implemented in order to address a gap in operational ocean observations on the continental shelf in the central Gulf of Mexico. This is a very dynamic region where riverine input, dominated by the Mississippi River but also influenced by other rivers such as those discharged through Mobile Bay, has a major influence on oceanographic processes. Seasonal hypoxia has occurred since at least the 1950â€™s (Brunner et al., 2006), and it was observed in each of the 5 years of a project headed by the PI and funded by the Northern Gulf Institute. In December of 2004 CenGOOS began operations when a 3 m discus buoy, with satellite data telemetry, was deployed at a location south of Horn Island near the 20 m isobath. This buoy was damaged during hurricane Katrina in August 2005, but despite being dragged by strong waves and currents over a path of some 15 km, the buoy survived the storm and provided crucial information on winds and waves (Bender et al., 2010a,b; Howden et al., 2007). This was a striking example of the value of high frequency, real-time data that a mooring can provide. Recently the elements of a seafloor package have been ordered that will give monitoring information on the seafloor temperature, salinity and dissolved oxygen, which will be acoustically telemetered to the buoy, greatly enhancing the observing system. The two 3-m discus buoy systems (they are rotated in and out) are aging and no funds have been able to be acquired to modernize their data logging and telemetry systems. Despite the value of this observing system, funding pressures have decreased the operating budget for the buoy and there is some danger of losing funding altogether. The purpose of this project is to modernize the buoy systems and fully fund the operation and maintenance of the buoy and its components, to continue to operate the buoy to provide scientists and decision makers with real-time data that can be used to address a range of questions. Buoy data can be used to inform scientists and marine resource managers what surface meteorological conditions are like, how strong and in what direction currents are flowing, when hypoxia has begun to form, how long hypoxia lasts, is the coastal ocean being affected by ocean acidification, as well as a helping to answer whole host of other questions. Collaboration with other projects will add to overall understanding. Mississippi coastal resource managers (e.g., DEQ and DMR) will be surveyed to see if information products can be tailored to meet their needs. The location of the buoy mooring is at 34.0423N, 88.6473W. The seafloor mooring will be placed at the edge of the watch circle of the mooring chain. The Central Gulf of Mexico Ocean Observing System buoy system will be modernized, missing instrument inventory will be replaced, and a second seafloor mooring will be purchased to rotate with the first. This will ensure the continuation of high quality data. One of the main results of this project will be the continuation of near real-time, quality controlled data available for scientists, resource managers (including those monitoring restoration projects), emergency response managers, marine operations managers, and the general public. These data will be served on the CenGOOS website (www.cengoos.org), the GCOOS Data Portal (data.gcoos.org), and through the National Data Buoy Center (www.ndbc.noaa.gov).		Yes	Yes	No	Yes	No	Yes	Yes	15	Yes		$ 340,380.00	$ -	
	Research and Education	4367	5/19/2015	Restoration Plan for the Henderson Point Property	This restoration plan has two components. First, the terrestrial portion of the property will be restored to its historic, natural use by removing concrete and miscellaneous debris from the property. Invasive species will be removed, and an invasive species management plan will be implemented. This will allow native vegetation to infiltrate and grow on the property. The second component is to stabilize the shoreline and reduce shoreline erosion through the construction of several breakwaters along the western shore of the property. These breakwater structures will be constructed with recycled concrete removed from the property. They will also create habitat for oysters, crabs, and fish.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 600,000.00	$ -	
	Research and Education	4370	5/28/2015	USM Gulf Park Beachfront Pier Restoration	The University of Southern Mississippi's Gulf Park campus is the state's only beachfront campus. This campus had a fishing/recreational pier extending out into the Gulf of Mexico for many years. The pier offered academic, research and recreational opportunities for students, faculty, and staff as well as local residents and tourists. Over time and as a result of storms and other harsh events, the pier eventually was overcome by the elements of nature. The purpose of this proposed project is to reconstruct this pier and once again offer the direct Gulf access that had been in place for the above mentioned Mississippi residents and other stakeholders for many years. Also, with USM's growth in the areas of marine and coastal science, this pier will be a critical academic and research resource for Mississippi's premier university marine related programs.	Harrison	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ 1,500,000.00	$ 50,000.00	
	Research and Education	5371	6/25/2015	Visitor and Artist Education Retreat	The project will create an experience for visitors and students to study artists and the inspiration that comes from the natural landscapes of the Gulf Coast. This includes providing a setting and accommodations for artists and visitors to experience the landscape of the Gulf Coast, restoring the natural landscapes that have been damaged by the most significant natural disaster in the U.S. and other calamities, restoring and creating physical components of the cultural landscape that enhance comprehension of the influence of climate and ecology, providing educational opportunities about natural landscapes and cultural resources, and providing access to natural landscapes and cultural resources to artists, visitors and students. Gulf Coast landscapes serving as inspiration for the programs will be the maritime live oak forest, the beach landscape the Schooner Pier Complex, and Deer Island. The maritime forest area east of the Ohr-O'Keefe Museum of Art will be evaluated for health and structural stability. Damaged and unstable trees will be repaired. The beach landscape east of the Schooner Pier to the Biloxi Bay Chamber of Commerce will be restored to its natural condition through the establishment of sand dunes, intermittent salt marshes, and open beach areas. The erosion of Deer Island will be stopped and land mass regenerated. Erosion protection and accretion of sand and building of land mass at Deer Island will be accomplished by the restoration of the oyster reefs on the north side of the island. The establishment of breakwaters and salt marshes for sand accretion on the south side of the island will protect the existing beach and enhance land mass regeneration through the restoration of salt marshes. The Live oak and oak groves on the island will be evaluated, invasive trees will be removed, and the remaining trees will be managed for best health. The old roadway down the center of the island will be repaired and made suitable for visitor access. Additional tree species will be planted on the island to provide biodiversity in the forests and to establish varied habitats for the islandâ€™s animals. An island management plan will be implemented to accommodate visitors walking through the landscape. Eight wooden skiffs and ten catboats will provide a cultural experience for artists and visitors. Storage will be built to house the boats in a location that will provide safe and easy access to the Schooner Pier Complex launch areas. Educational experiences will be supported with screen art studios both on Deer Island and along the edges of the maritime forest across from Deer Island. The island studios will be within the Live oak groves, at oyster point, within the old slash pine forest, at the Grand Bayou tidal stream, and along the edge of the vast black needle rush marshes and will be of a tear-away nature that can be reassembled after tropical storms. Two boats equipped as art studios with drawing boards will provide island access and views to the island landscapes, the mainland development, and bridges. These boats will also provide access to the Back Bay and Davis Bayou in Ocean Springs. Four 12-passenger vans and two 30-passenger buses will provide trips to study art and artists along the Gulf Coast and New Orleans, as well as boat building facilities and repair yards on the Back Bay of Biloxi.	Harrison	Yes	No	No	Yes	No	Yes	Yes	10	Yes		$ 11,000,000.00	$ -	
	Research and Education	5377	7/3/2015	Habitat Restoration Stewardship Fund	Habitat restoration in coastal Mississippi has lagged behind habitat restoration in other states, even when some grants for habitat restoration were available because of the lack of start-up funding or the lack of matching funding for habitat restoration grants. We propose that some RESTORE funding be provided to an agency in Mississippi, perhaps the Mississippi Department of Environmental Quality, coffice of Restoration, on an annual basis for a period of 20 years that can be used to leverage existing funding sources to implement on-the-ground habitat restoration. These habitat restoration techniques may include, but are not limited to, invasive species control, prescribed burning, fuel reduction, hydrologic restoration, and native species planting. The funding could be available on a competitive basis and would be available to match federal, state and local government funding or private funding. Requiring that these funds be matched at least dollar for dollar level would double the amount of money available for habitat restoration by leveraging funds and effort from a variety of sources including federal, state and local government agencies, non-profit organizations and private businesses. Many of the currently missed funding opportunities are from federal sources; using a small group of federal and state agency representative and non-governmental organization representatives to rank the projects annually would encourage cross-communication and cooperation in leveraging their resources to better restore habitats on the Mississippi Gulf Coast. Having the flexibility in a funding stream to engage on-going efforts and novel funding streams would allow the state of Mississippi to make maximum use of available resources. The benefits of a long-running habitat restoration stewardship fund include leveraging of existing resources, development of new habitat restoration resources, better planning for habitat restoration, improved coastal habitats, better protected keystone and rare species, cleaner soil and water resources, enhanced resilience to disturbances, and more jobs for local communities.	Hancock, Harrison, Jackson, plus others as appropriate	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 20,000,000.00	$ 20,000,000.00	
	Research and Education	5378	7/7/2015	Intelligent Communities: Helping rural communities transition to, plan for, and prosper in the digital age	The Mississippi State University Extension Intelligent Community Institute helps rural communities transition to, plan for, and prosper in the digital age. The Institute, in partnership with local champions, schedules a series of presentations to increase awareness of what the implications of the digital age are for rural communities. The next step is the community completing a checklist that will serve as a benchmark and plan to move forward. The Institute coordinates resources to address the needs identified in the checklist report. For example, helping communities with their online presence, deploying or enhancing robotics to help with their knowledge workforce, increasing telehealth awareness, providing digital literacy workshops, etc. The ultimate objective is to help rural communities become intelligent. An intelligent community is one that understands the challenges of the digital age and takes conscious steps to prosper in it. If funded, this proposal will target both coastal communities as well as more rural communities to the north and help them transition to the digital age. This goes hand in hand with Governor Bryant's plan to increase broadband connectivity on the coast. Broadband connectivity is but one component that needs to be coupled with education and awareness to better use the technology. The Intelligent Community Outreach achieves precisely that.		Yes	No	Yes	No	Yes	No	No		Yes		$ 150,000.00	$ -	
	Research and Education	5380	7/13/2015	Reef Fish Barotrauma Reduction, Education and Outreach Program	Reef fish such as snapper, grouper, amberjack and sometimes red drum caught in waters deeper than 30 feet can suffer from barotrauma. Restrictive seasons, creel limits and size limits are forcing the release of reef fish and untargeted species caught by anglers out of season. Bartrauma reduction devices allow the fish to be returned back to the depth from which it was caught without puncturing the skin or swim bladder. Research facilities and anglers in the Gulf have been experimenting with the use of barotrauma reduction devices recently and have determined they are an effective way to return fish to the depth from which they were caught and increase survival rates. Increasing survival rates can possibly lead to more consistent recreational seasons and help improve stock sizes. An education and outreach initiative should be coordinated by the Mississippi Department of Marine Resources along with other appropriate state agencies and research institutions as well as conservation and industry groups such as the Coastal Conservation Association and American Sportfishing Association and local retailers. Printed materials, videos and workshops should be targeted towards anglers and charter captains and efforts should be made to provide reduction devices to anglers and captains.		Yes	Yes	No	Yes	No	Yes	No		No		$ 1.00	$ -	
	Research and Education	5383	7/31/2015	MS Gulf Coast Economic Development Data Project	Project summary Southern Mississippi Planning and Development District will create and maintain a one-stop resource for consistent, accurate, up-to-date data across the Mississippi Gulf Coast counties of Hancock, Harrison and Jackson. It will be designed with input from and for use by professional economic developers, local governments, tourism bureaus and others actively seeking to create new jobs, grow existing business and stimulate more wealth along the coast. A standardized approach to data collection will benefit the entire region. Data collection input and display Data collected will be organized and maintained in a geospatially-enabled database management system. SMPDD will use a dedicated GIS server and provide user login and password-protected access for authorized users. One of the major features and benefits of this solution will allow continuous access to the most updated data, as the server will retrieve data directly from the working database. The data may be displayed in static tables or in user-generated tables, allowing online map viewing and hard copy downloads. Data categories and areas of research SMPDD will seek input from the professional economic developers to determine the fields for the database. Some data may be available on a public domain and other data may be purchased. Topical areas may include but are not limited to â€“ - Population and projections - Growth patterns - Building permits - Workforce/labor - Infrastructure - Real Estate and property tax Potential partners We will seek and anticipate cooperation with â€“ - County and municipal governments - Gulf Coast Business Council - Gulf Coast Economic Development Alliance - Gulf Regional Planning Commission	Harrison, Hancock, Jackson	Yes	No	Yes	Yes	Yes	No	No		Yes		$ -	$ -	

	Research and Education	5385	8/11/2015	Airport Canopy Solar Farm	Background: Sustainability is an important component to the continual growth and operation of airport facilities. The Gulfport-Biloxi International Airport has worked diligently to develop a sustainability strategy. The strategy was developed with the support from the Federal Aviation Administration. One element of the overall sustainability strategy is renewable power. The airport seeks to accomplish this objective through the generation of power utilizing solar panels. The utilization of BP Deepwater Horizon Oil Spill funding for the development of a sustainability effort such as this allows an entity who is a major user of electricity in the community to become more self-reliant. BP funds are used for an initiative that will realize a reoccurring return on investment. The Airport has a rental car parking area where the vehicles of 5 rental car companies are parked within 150 parking spaces. This parking lot is ideally situated for a solar canopied parking structure to be erected and installed. The structure serves a dual purpose in that it generates renewable power that will reduce the amount of electricity purchased by the Airport thus reducing the overall environmental footprint of the airport while providing covered parking spaces for the rental cars on airport. Typically large expanses of land are utilized for solar arrays making large tracks of land unavailable for other uses. This design and placement of this structure actually increases the usage of the area by accomplishing the two purposes noted above. Discussion: With this design, wildlife habitats and vegetation are left undisturbed further reducing possible erosion events. The providing of shade also helps to diminish the heat island effect of a solid surface parking lot. As electricity prices continue to rise, having available generation to reduce electrical grid demand is increasingly important for airports. The power generated from the solar panels reduces the demand from the local electric utility therefore reduces the amount of power needed to be purchased which allows funds to be better allocated for amenities for the traveling public and to further carry out other sustainability goals and objectives The Gulfport-Biloxi International Airport recognizes that the canopied solar structure in the rental car parking lot is an essential element of the airportâ€™s sustainable, renewable energy plan. Summary/Benefit to Region: Solar panel covered parking spaces enhance the airportâ€™s services to the public by both providing cooler vehicles on sunny days and keeping customers dry during inclement weather. Each greatly enhances the overall satisfaction of the flying public. Secondly, the rental car parking area at the Airport is highly visible to the public. Familiarizing Mississippi Gulf Coast visitors and residents with solar technology, it further promotes the sustainability efforts of the community. A sustainable, renewable project at the Gulfport-Biloxi International Airport can serve as an accessible educational and demonstration tool of available technology, possibly leading to additional community interest in renewable energy. Project Cost: The cost for an Airport canopy solar farm is $3,600,000. Other funds have already been expended towards this effort. To date, Gulfport-Biloxi Airport has contributed a total of $41,465	Harrison	Yes	No	No	No	No	No	Yes	90	Yes		$ 3,600,000.00	$ 175,829.00	
	Research and Education	5387	8/13/2015	Continuation of Hancock County Beach Pathway	Project Summary: The extension of the Hancock County Beach Pathway is needed to provide greater access to all people in Hancock County to the beachfront. The beach pathway provides access to the waterfront for people as a daily part of life. The path can be used as transportation, for recreation, for meditation and for social gathering. Additionally, because of the construction of the beach pathway is scored concrete, the pathway is accessible to people who may require help in getting around. The flat surface of the pathway is easily accessible for mobility-impaired (those using wheelchairs, scooters, walkers, crutches and canes). The proposed project will provide indirect benefits to the natural coastal environment through the provision of public recreation and access to the marine and coastal environment. The provision of the walkway and education opportunities tied to the walkway will create an appreciation of the unique natural attribute of the coastal environment. Improved access leads to a greater appreciation and understanding of the need for improved water quality and protection of natural resources. Also, by utilizing existing waterfront access space as fully as possible and minimizing the need for new waterfront access sites, this project directs development away from sensitive natural coastal environmental resources. During Hurricanes Georges, Lili and Katrina, the completed section of the pathway that is attached to the seawall sustained little to no damage and held the sand beach in place. The seawall that did not have the beach pathway adjacent to the seawall sustained severe cracks. Therefore, the beach pathway also serves as a necessary form of sustainability for the remaining beachfront area of Hancock County. In addition, the proposed project is consistent with the Hancock County Sand Beach Master Plan and, as such, is consistent with elements defined in the Mississippi Coastal Program. The Beach Pedestrian & Bike Pathway extends from the Bay Bridge in Bay St. Louis to just past Dane street in Waveland. The remaining section of beach front in Hancock County that does not have a pedestrian · bike pathway is from Dane street to the Silver Slipper Casino. Currently, the County has received grant funding from MDOT & USFWS Coastal Impact Assistance Program to complete approximately 1.0 miles of beach pathway from the Silver Slipper Casino to the end of the sanded beach area. Approximately 0.4 or roughly 2200 LF of Beach pathway has been completed with 0.6 remaining. Once this section is completed, Hancock County will have two sections of beach pathway that are not connected. The proposed RESTORE Project would be approximately 2.5 miles of beach pathway that connect the two finished sections of beach pathway providing for one continuous pedestrian bike pathway from the Bay Bridge to the Silver Slipper Casino.	Hancock	Yes	No	No	Yes	No	No	Yes		Yes		$ 2,500,000.00	$ -	
	Research and Education	5388	8/30/2015	Developing Grassroots Ideas for the Purpose of Building a Sustainable Economic Engine by Finding Innovative Ways of Restoring Gulf Coast Industry and Reinvesting in Existing and New Business Development	Executive Summary The proposed plan outlines a multi-faceted approach to developing a Community-based High Technology Laboratory capable of producing an â€œEconomic Engineâ€ resulting in innovative approaches to developing for-profit businesses and industry, future products to capture retail trends, and innovations in green technologies in order to produce sustained economic and community development in targeted impoverished regions. The Coastal cities and Counties sit at the epicenter of the slowest recovery from the effects of natural disasters and economic and community development in the State of Mississippi. Hancock, Harrison, Jackson Counties in Mississippi are parts of the coastal Region which severely suffers from challenges in business development, economic disparities, poor school systems and inadequate predictable measures for warning evacuees and responders during disaster events. A multi-faceted approach capable of maximizing existing resources while creating an effective â€œEconomic Engineâ€ needed to stimulate job creation in the targeted region. This engine has to be strong enough to â€œdriveâ€ a consistent level of development while creating tools that will produce short-term, mid-term and long-term results. The Transocean and BP settlements can be effective â€œDriversâ€ in order to have create the flexibility to assess outcomes and effectively change course to achieve set objectives capable of sustaining effective economic growth. We believe the goal in the Coastal region should be to create a viable, productive and growing economy capable of maximizing its rich assets. The Living Word High Technology Renewable Energy and Business Development Incubator (HTREBDI) can be the catalyst needed utilizing SBS Laboratories to effectively â€œdriveâ€ economic and community development in the Coastal region.	George,Jackson,Stone,Hancock,Pearl River,Mobile,St Tammany	Yes	Yes	Yes	Yes	Yes	Yes	Yes	25	Yes		$ 10.00	$ -	
	Research and Education	5392	9/1/2015	Point Cadet Waterfront Boardwalk, Marina and Small Craft Harbor Expansion and Tricentennial Park Improvements	Through implementation of this comprehensive project to improve public access and balance public-private development along Point Cadet's southern waterfront from the Biloxi-Ocean Springs Bridge to the Biloxi Small Craft Harbor in downtown Biloxi, the general public, the State of Mississippi, the City of Biloxi and private developers will benefit. The project includes upgrading the existing Point Cadet Marina and expanding it west and constructing an ADA-compliant public boardwalk with amenities that will meander along the waterfront to the Biloxi Schooner Pier Complex, where a lighted crosswalk will provide safe pedestrian access across Highway 90 to Tricentennial Park and the Ohr-O'Keefe Museum. In the same area, the public boardwalk will connect with the existing seawall walkway to provide pedestrian access to the Biloxi Small Craft Harbor in downtown Biloxi, which also will be expanded and upgraded to support growth of the charter boat industry and expansion of sports fishing tournaments and other water-dependent activities that will benefit the local and state economy. The Point Cadet Marina upgrade and expansion component will provide new slips to meet market demand to accommodate 75-foot and larger recreational and sports-fishing yachts owned/operated by Mississippi Coast residents and Intercoastal Waterway visiting boaters. Removal of marina sediment will restore boater safety and will accommodate deeper draft, large recreational boats. The project involves reconfiguring and upgrading finger piers and existing boat slips, constructing new boat slips and finger piers to the west and installing a new breakwater to increase the resiliency of shoreline improvements and the expanded marina by protecting them from wave action and storm surge. The public boardwalk, which will include open-air pavilions, lighting, educational signage and a northern docking area to support the State''s shuttle service to Deer Island, will be constructed to support public enjoyment of the waterfront,to expand family-oriented activities and to provide small business development opportunities. The public waterfront area due south of the Biloxi-Ocean Springs Bridge enjoyed considerable public use for a wide variety of family-oriented activities prior to Hurricane Katrina, including fishing tournaments, festivals, concerts, educational programs, observing marine life and shore birds, and just generally appreciating nature. Since 2005, the State fishing pier and shoreline boardwalks have not been replaced and the area poses safety hazards to the few who attempt to access the waterfront to fish or to enjoy the view. Through this project,the City of Biloxi will restore safe access through construction of the ADA-compliant boardwalk that will include amenities to support a variety of public waterfront uses. Low-profile, all-weather signage will be installed to educate the public about native marine species, native and migrating bird species and restoration of other natural resources including nearby Deer Island. Existing surface parking north of the Point Cadet Marina will support increased public usage in the project area; a portion of the parking area will be restricted in support of educational and research vessel staff and operations. The existing green space between the parking area and the new boardwalk will be enhanced as an open space for special events and the public' s daily enjoyment. Through the boardwalk, the waterfront park will connect to the Point Cadet Marina and the Biloxi Small Craft Harbor, expanding opportunity for small business growth through boat rentals and tours and special events such as boat shows and festivals. Redevelopment of the Point Cadet project area will spur revitalization of this unique waterfront resource that affords unobstructed views of Deer Island and the Mississippi Sound, offers direct boat access to navigational channels and vehicular access to Highway 90, and is in close proximity to the Tricentennial Park and Ohr-O'Keefe Museum. In addition to installing a crosswalk to provide pedestrian access across Highway 90, Tricentennial Park improvements will include uniform landscaping, lighting, irrigation and walkways, educational signage and kiosk exhibits and rebuilding a berm to support a band-shell/gazebo for outdoor concerts and other activities. Additional parking spaces will be installed on the northeast portion of the site and the southeast section will be restored as a wetlands garden with interpretive signage identifying the benefits provided by wetlands in Coastal Mississippi. Biloxi Small Craft Harbor improvements will reconfigure and expand the area to allow all Biloxi-based charter boats to berth together in one central harbor located on the Biloxi Lateral Channel with	Harrison	Yes	Yes	Yes	Yes	No	Yes	Yes	80	Yes		$ 35,000,000.00	$ -	
	Research and Education	5393	9/1/2015	Public Access Improvements and Point Cadet Marina Improvements	The City of Biloxi is partnering with the State of Mississippi to restore safe access to the Point Cadet waterfront area south of the Highway 90 Bridge with an ADA-compliant boardwalk to support a variety of public waterfront uses. Signage will be installed to educate the public about the Mississippi Coast's natural resources and restoration activities at a nearby oyster reef and Deer Island. Sediment will be removed from the Point Cadet Marina to improve safety. Prior to Hurricane Katrina, this area enjoyed considerable public use for a wide variety of family-oriented activities including fishing tournaments, festivals, concerts, educational programs, flying kites, observing marine life and shore birds, and just generally appreciating nature. Since the storm, the State fishing pier and shoreline boardwalks have not been replaced and the area poses safety hazards to the few who attempt to access the waterfront to fish or to enjoy the view. With funding assistance, the City of Biloxi will restore safe access to the waterfront through an ADA-compliant boardwalk that will include lighting and seating to support a variety of public waterfront uses. Low-profile, all-weather signage will be installed to educate the public about native marine species, native and migrating bird species and restoration of other natural resources including Deer Island. Implementation of the project will encourage residents and visitors to rediscover this public asset and will spur the revitalization of this unique waterfront resource. Project design is being coordinated with the Mississippi Secretary of State's Office and Department of Marine Resources to most efficiently restore safe public access to this Tidelands area and to maximize public benefit through appropriate land uses that support a broad range of family-friendly and educational activities. Existing surface parking north of the Point Cadet Marina will support increased public usage in the project area; a portion of the parking area will be restricted in support of USM research vessel staff and operations. The existing green space between the parking area and the new boardwalk will be enhanced as an open space for special events and the public's daily enjoyment. Removal of marina sediment will restore boater safety; dredging also will accommodate deeper-draft, large recreational boats. Upgrades to marina finger piers and boat slips will support the City's renewed efforts to diversify its "blue economy" through sailing regattas and fishing tournaments. The public boardwalk will provide safe pedestrian access along Point Cadet's eastern shoreline south of the Highway 90 Bridge and along the section of the southern shoreline that supports the Point Cadet Marina. The boardwalk eventually will connect with the Sand Beach, Biloxi Schooner Pier Complex and a Highway 90 crosswalk to provide safe access to the Ohr-O'Keefe Museum of Art. The project site is just north of Deer Island and south of the Maritime and Seafood Industry Museum, an ideal site from which to host special public programs and events to showcase and celebrate Mississippi's marine-related natural resources and on-going State and local efforts to preserve, conserve and enhance them.	Harrison	Yes	No	Yes	Yes	No	No	Yes	60	Yes		$ 4,000,000.00	$ 1,000,000.00	

	Research and Education	5394	9/1/2015	Biloxi Small Craft Harbor Expansion	Through this project, the City of Biloxi will renovate and expand the Biloxi Small Craft Harbor to allow all Biloxi-based charter boats to berth together in one central harbor located on Biloxi's Lateral Channel with direct access to East and West Channels. Highway 90 binds the harbor to the north and is within half a mile of I-110, in close proximity to major resort hotels. The project involves adding slips east of the harbor and reconfiguring existing slips to accommodate all of Biloxi's existing charter boats. Currently, the harbor is bordered on the west by a casino and its parking garage, which hinders accessibility and obscures its visibility to the public. Expanding the harbor to the east will not only provide needed new slips, but will allow for improved accessibility and enhanced presence on Highway 90. Rather than being tucked away from sight as it is now, the new harbor will attract tourists and residents to enjoy public improvements that showcase the waterfront, offer a variety of marine-related services including boat charters, and offer educational information about Biloxi's marine heritage. In addition to approximately 60 new slips, the renovated harbor will have public restrooms and facilities to weigh, display and clean fish. Other public amenities will include staging areas for sports fishing tournaments and other marine-related events such as children's fishing rodeos. Space also will be available for "off the boat" seafood sales and retail venues for ice and other typical supplies to support charter boat fishing. Educational information about Gulf of Mexico deep-water species, local ecology and the cultural history of deep-sea fishing in the Mississippi Sound will be prominently displayed throughout the harbor complex to present an authentic interpretation of Biloxi to tourists and new residents. The new Biloxi Small Craft Harbor will be a prominent link in a chain of amenities located along Highway 90 from central Biloxi to Point Cadet, which includes the historic downtown district, the Biloxi Town Green, the Ohr-Oâ€™Keefe Museum of Art, the Schooner Pier Complex, the proposed Tricentennial Park, Harrahâ€™s waterfront park venue, St. Michael's Church, the Maritime and Seafood Industry Museum and the new Biloxi Waterfront Park and Fishing Pier. During development of Biloxi's Post-Katrina Comprehensive Plan, citizens identified expansion of recreational opportunities and improved access to the waterfront as top priorities, both of which will be supported through this project. Expansion and reconfiguration of the Biloxi Small Craft Harbor will generate many public benefits including improved public access to a waterfront area in downtown Biloxi, improved use of public waterfront space and resources through consolidation of charter boats into one location and expanded family-oriented tourism activities. The project will support boating and fishing; freed space made available in other Biloxi marinas as a result of the charter boat consolidation will benefit not only the recreational boaters that will relocate from the small craft harbor, but also transient boaters and other recreational boaters. Educational opportunities also will be expanded through displays, signage and venues for a variety of marine-related programs, field trips and tours. The design of the new harbor will include energy efficiency improvements, modern waste disposal methods and best management practices for stormwater management.	Harrison	Yes	Yes	Yes	Yes	No	No	Yes	80	Yes		$ 6,000,000.00	$ 1,000,000.00	
	Research and Education	5395	9/1/2015	Tricentennial Park Public Improvements	Tricentennial Park, located on the north side of Highway 90 in East Biloxi, was purchased to preserve public access to valuable waterfront property that boasted the restored, historic Tullis-Toledano Manor and some of Biloxi"s finest old live oak trees. Damage from Hurricane Katrina destroyed the Manor and its outbuildings, but many of the oaks survived and the site continues to serve a public purpose by preserving unobstructed views of the Mississippi Sound. Through this project, the City seeks to improve the eight acre site to complement activities of the Ohr-O"Keefe Museum of Art (located on the west side of the site); to provide pedestrian access across Highway 90 via a crosswalk to connect the park with the Sand Beach and Schooner Pier Complex; to restore a wetlands area on the southeast portion; and to enhance recreational opportunities on the park"s east side. Improvements will include uniform landscaping, lighting, irrigation and walkways, additional parking on the northeast portion of the site, interpretive signage, relocation of the Biloxi Tricentennial mosaic mural to the park, and rebuilding a berm to support a band-shell/gazebo for outdoor concerts and other activities. Before development of Highway 90, the southeast portion of the site was tidally-influenced and will be restored as a wetlands garden area with interpretive signage identifying the benefits of restoring and/or preserving wetlands in Coastal Mississippi. A pedestrian crosswalk across Highway 90 will be installed to provide public access to connect the park with the Sand Beach and Schooner Pier Complex. Benefits derived from implementation of this project include, but are not limited to, improved public access to a public park with magnificent views of the Mississippi Sound and Deer Island; expanded public recreational park space for picnics and other leisure activities; restored wetlands and improved water quality to support marine species and public recreational uses. Benefits also include expanded educational opportunities through signage and displays to educate the public about the value of the Coast"s natural resources and habitats. Increased visitation to the park as a result of project implementation is anticipated to have regional economic benefits, such as job creation and increased sales tax collections, by stimulating redevelopment in East Biloxi. Match for the project, valued at an estimated $90,000, will be provided by the Ohr-O"Keefe Museum of Art in the form of in-kind services contributed for architectural and landscape plans; in-kind labor provided by the Harrison County Public Works Department; and donation of LED lighting fixtures and installation services provided by Mississippi Power Company.	Harrison	Yes	No	Yes	Yes	No	Yes	Yes	40	Yes		$ 840,000.00	$ 90,000.00	
	Research and Education	5399	9/2/2015	Point Cadet Revitalization from Highway 90 Bridge to I-110 Corridor along the Back Bay of Biloxi	This comprehensive project will revitalize waterfront areas of East Biloxi from the Highway 90 Bridge north and west to the I-110 Corridor through multi-use improvements to enhance and restore natural resources, create jobs, support the seafood and maritime industries, and expand family-oriented attractions to extend visitors' stay on the Mississippi Gulf Coast. Throughout the project area, the City will provide safe, convenient public access to the shoreline and will enhance traditional working waterfront activities with a variety of land uses that showcase local seafood through shopping, dining, entertainment, and educational venues. RESTORE grant funds will be used as part of a public investment strategy to yield a long-term increase in value by revitalizing the Back Bay shoreline east of the I-110 Corridor and adjoining Old Biloxi neighborhoods by enhancing public access to the waterfront and revitalizing the seafood industry through public improvements that will include expanded commercial dock space and supportive landside amenities. The project will include incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program. Redevelopment of the project area, as well as of the local seafood industry, has been particularly slow following its devastation by Hurricane Katrina. The Back Bay Festival Marketplace and recreational marina component of the overall project will be located at the site of the Sherman Canaan Fishing Dock, which includes approximately 15 City-owned acres at the north end of Lee Street. This public waterfront area will be reconfigured to offer a marina with recreational boat slips for temporary and long-term rental (for private and for-hire vessels); venues for retail shops and restaurants; a sailing school; and space for Mississippi Department of Marine Resources boating safety lessons and boating storage/operation. The market place will include an open-air kitchen area to showcase local seafood and to educate the public about seafood cooking methods and opening oysters, as well as facilities for workforce training in culinary arts that focuses on Gulf seafood and locally-grown/raised products. Shrimping boats currently berthed at the Sherman Canaan Fishing Dock will be relocated east to a new commercial marina that will be constructed on previously-developed property to be acquired by the City in the vicinity of Oak Street. This new marina will improve commercial boat access to Gulf channels and will offer landside improvements such as convenient off-loading areas, boat-building and repair areas, marine services and net repair areas. Pedestrian walkways will link these two activity hubs to each other and to other points of interest in the project area, including the National Register, City-owned Old Brick House and the Bayou Auguste Restoration Project, which involved a local, state and federal partnership effort to convert a neglected urban bayou into a beautiful 12-acre park. The Pine Street Waterfront Access Road and Maritime Commerce Corridor will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. Debris removal, storm-resilient shoreline stabilization measures and pedestrian access improvements along public waterfront property from the Biloxi Fishing Bridge south to and under the Highway	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 35,000,000.00	$ -	
	Research and Education	5400	9/2/2015	Pine Street Waterfront Access Road and Maritime Commerce Corridor	The Pine Street Waterfront Access Road and Maritime Commerce Corridor in East Biloxi will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. The comprehensive project goal is to improve public access to waterfront commercial, industrial and recreational venues in East Biloxi thereby stimulating the economic growth of existing marine-related commerce, such as the shrimp boat off-loading docks at St. Michael's Fuel and Ice Dock on Biloxi Bay at the foot of 5th Street. Improved access also will stimulate redevelopment of East Biloxi through new business start-ups and the expansion of tourism and recreational waterfront amenities.	Harrison	Yes	Yes	Yes	Yes	Yes	No	Yes	90	Yes		$ 20,000,000.00	$ 1,000,000.00	
	Research and Education	5401	9/2/2015	Point Cadet Sunrise Park: Biloxi Tip of Peninsula Public Access and Shoreline Stabilization Improvement Project	The City of Biloxi is requesting funding support to remove marine debris and to restore the shoreline of Point Cadet from the Biloxi-Ocean Springs Bridge north to the Biloxi Fishing Bridge. Debris removal, storm-resilient shoreline stabilization measures and pedestrian access improvements along the City-owned waterfront property will expand public opportunity to access a unique area where the Mississippi Sound merges with the waters of the Back Bay of Biloxi. The project will enhance preservation of undeveloped shoreline for the benefit of the public as well as for marine and bird species. In addition, low impact all-weather educational signage will expand opportunities to learn about habitat supported by tidally-impacted areas and to encourage long-term stewardship of Coastal natural resources. The project includes extending the small sand beach on the shore east of the Maritime and Seafood Industry Museum; incorporating the use of the seawall in improving pedestrian access; improving the safety and security of the walkway under the Biloxi-Ocean Springs Bridge; and constructing a small pier for fishing and crabbing. Upland improvements to be built near the MSIM include a shoofly around a mature live oak tree; a gazebo; a fountain; a foundation for the Golden Fisherman statue; and a wooden boat-building and training demonstration site. Those who attend the many activities hosted at the MSIM and/or Biloxi Waterfront Park frequently are tempted to walk along the shoreline north of the Park's splash pad to access the nearby Biloxi Fishing Bridge. Hurricane debris, litter, unchecked invasive plant growth and lack of a well-defined, level walkway make what should be an enjoyable nature walk into a hazardous experience. Project implementation will address this problem by providing ADA-compliant pedestrian connectivity along the shoreline of the project area. In addition to the general public, others who will benefit specifically from project implementation are shoreline and wade fishermen, throwers of cast nets and those who enjoy non-motorized water activities such as kayaking, canoeing, and paddle boarding. Participants in the MSIM's numerous educational activities and summer camps for children also will benefit from expanded on-site marine-related programming. Marine species and native and migratory shore birds also will benefit from project implementation through replacement of invasive, non-native plants with native plant species appropriate to the shoreline environment. The project complies with the Mississippi Coastal Program in terms of restoring wetlands and marine/shoreline habitats, improving management of stormwater runoff into a public water body and addressing shoreline erosion. Not only will the project provide expanded access to the waterfront and improvements to enhance public enjoyment of the waterfront, but the safety of those who visit the project area will be greatly improved through the removal of hazardous debris. The project's location between City-owned recreational amenities will allow expanded public access to the shoreline without requiring the construction of additional surface parking. As a part of this project, architectural and engineering planning and design for Phase II of the project will begin. Phase II includes building a longer pier for fishing and dock space for a schooner; dredging at the end of the pier to provide an access channel to the main navigation channel; and clearing all marine debris in the new access channel.	Harrison	Yes	Yes	No	Yes	No	Yes	Yes	60	No		$ 500,000.00	$ 25,000.00	

	Research and Education	5402	9/2/2015	West Biloxi Festival Boardwalk and Boat Ramp	The portion of Harrison County Sand Beach in Biloxi located between Rodenberg Avenue and Camellia Street is noteworthy because much of it is separated from Highway 90 by a swath of land upon which is built tourist-oriented establishments that form a buffer between the shore and the highway. While this section of beach is especially beautiful, the buffer formed by businesses and condominiums makes access to the beach less visible and less inviting to passers-by. The project, which involves a partnership of the City of Biloxi and Harrison County, aims to increase public access to this portion of the beach through construction of an environmentally-sensitive boardwalk with linking walkways to adjacent businesses and to new public parking areas located at intervals with appropriate signage. Construction of a boat ramp at Camellia Street will provide access to the Mississippi Sound for the boating and fishing public. The boardwalk will border the edge of the sand beach along the seawall, south of existing commercial development. It will provide a pedestrian venue to facilitate access to the beach and it will be a destination in itself that will draw people to the area and increase business. It also will be a setting for festivals and other outdoor community activities. Two pavilions will be constructed along the boardwalk, one east of Veterans Avenue and one near the Camellia Street boat ramp to support field trips, festivals and general recreation. The boardwalk will have intermittent shaded areas, benches and kiosks. Low impact signage will explain beach ecology in the area, including identification of native plants and shoreline birds. Project benefits include increased access to the Mississippi Sound for West Biloxi boaters and fishermen; expanded economic opportunities for area restaurants and retail businesses; improved access to the West Biloxi waterfront; expanded recreational and educational opportunities on the Harrison County Sand Beach.	Harrison	Yes	No	Yes	Yes	No	No	Yes	80	Yes		$ 6,000,000.00	$ -	
	Research and Education	5405	9/24/2015	Expansion of Blue Crab Aquaculture in Mississippi: New Economic Opportunities for Coastal Fishery Development	A reduction in blue crab harvests and the continuing decrease in numbers of juvenile blue crabs in estuaries across the Gulf of Mexico have stimulated interest in the use of hatchery-reared crabs in stock enhancement activities (should diminished recruitment occur in the fishery) and the development of new fisheries. Mississippi is one of only two states in the U.S. with a blue crab hatchery. The ability of USM/GCRL to produce â€œseedâ€crabs has great potential for development of a bait crab fishery and expansion of the soft crab fishery. Pond culture of blue crabs would greatly reduce pressure on natural populations and would allow for fishery development independent of wild stocks. Interest in new fishery opportunities for Mississippi fishermen and inland pond aquaculture ventures led to the formation of the Mississippi Blue Crab Aquaculture Consortium. The Consortium is focused on establishing blue crab aquaculture in Mississippi, specifically the culture of small crabs for soft crabs and bait to create new domestic value-added products based on hatchery production technology.The proposed work addresses several RESTORE program areas including: 1) workforce development through training and participation in new fisheries, 2) research and technology transfer and development through partnership with the Mississippi Blue Crab Aquaculture Consortium members (USM/GCRL, Mississippi Department of Marine Resources; USDAâ€™s Mississippi Natural Resources Conservation Service; Alcorn State University), 3) aquaculture through production of a high-valued product for human consumption and a cultured bait for recreational fishing, 4) fishery economics through new fishery development, and 5) resource management through conservation of wild stocks.Re-location and expansion of the current hatchery will provide additional technical jobs as well as employment opportunities for fishermen and entrepreneurs interested in new fisheries. Inland farmers with ponds will be afforded the opportunity to culture new species. Workforce development and training will occur through outreach activities and technology transfer that will focus on pond culture techniques and marketing.	Jackson	Yes	Yes	No	No	Yes	No	Yes	30	Yes		$ 13,000,000.00	$ -	
	Research and Education	5420	10/2/2015	Gulf Coast Broadband Project	The Mississippi Gulf Coast is in need of ultra-high-speed, fiber-optic, broadband infrastructure for Internet service that has sufficient scope, flexibility, availability and affordability, for all of its citizens, governments, and private businesses and industries to be able compete in regional, national and international markets for the creation and retention of new jobs, technologies, businesses, and industries and for the expansion and retention of equal opportunities for all citizens to enjoy a more prosperous, just, dignified and fulfilling life. The experience of many states and communities around the nation has been that large corporate providers of data transmission facilities do not have sufficient monetary incentive to bring affordable and ubiquitous, ultra-high-speed broadband Internet service to them unless there are significant public efforts and incentives to bring that technology to a proximity to all homes, businesses and public places that will make the final connectivity and service to all homes, businesses and public places by retail public and private service providers accessible and economically viable to the retail public and private service providers, affordable to the end users, and competitive in regional, national and world markets. The Cities of Biloxi and Gulfport established a unified effort to promote development of a minimum 1-Gig ultra-high speed Internet connectivity via a Fiber Optic Ring encompassing the entire Mississippi Gulf Coast. Subsequently, as of October 2016, eight other coastal cities and two of the three coastal counties have joined with Biloxi and Gulfport to form the Gulf Coast Broadband Initiative. With RESTORE funding assistance, the Fiber Ring will be implemented and administered by the GCBI, thereby providing to all area residents and businesses an affordable, ubiquitous and timely ultra-high-speed broadband Internet service. It will be delivered from the Fiber Ring to all end users by competitive licensing with private Internet Service Providers. The Gulf Coast Broadband Initiative has been created through an interlocal governmental cooperation agreement and is a separate legal and administrative organization with the authority to acquire any interest in real and personal property necessary to create and maintain the regional fiber optic ring in all of its parts. In order to eliminate the â€œdigital divideâ€and create equal opportunity for all residents and businesses to enjoy reasonably affordable access and use of ultra-high-speed Internet service, the Initiative may contract with for profit and non-profit business and social service entities and engage in all other legal activities to assist in making ultra-high-speed Internet service accessible and affordable to all residents and businesses in the entityâ€™s territory. To the fullest extent authorized by law, the Initiative will operate as a public utility and will be governed by the participating parties of the interlocal governmental cooperation agreement. The Gulf Coast Broadband Initiative is intended ultimately to include and serve all of Mississippiâ€™s coastal cities and counties who choose to join the Initiative (10 cities and two counties have joined thus far) and to benefit all those living or doing business in this region. In addition to its numerous other benefits, improving access to ultra-high-speed Internet service will support improved management of public lands and water bodies, as well as improve regulatory compliance monitoring in the participating cities and counties. Through the use of Internet sensors in drones, satellites and other devices, access to the new ultra-high-speed Internet service will	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	85	Yes	agriculture	$ 15,000,000.00	$ -	
	Research and Education	5421	10/6/2015	Economics and The Gulf Coastal States	The Objective is to collect economical data for the Gulf Coast fishermen, Anglers, processors, charter for hire and businesses that rely on our Nations marine resource to provide food and jobs for our Nation. This project will attempt to capture the true value of our Gulf of Mexico States marine resources and seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the products harvested throughout the entire seafood supply chain. We have never collect the true value to regional businesses benefitting from Gulf seafood. In most surveys they only show the x-vessel price. We will do a literature review to make sure we have included all value from the fish to the plate and all the jobs that depend on our Marine resource and all revenue that our nation receives. One example is Menhaden is used for making oil, fertilizer, dog and cat food. The oil is used as the primary ingredient in WD forty. This example is to show how the value chain comes into play and the many jobs that are created through the value chain. The outcome is to have a social and economical survey that will help capture the true value of the commercial seafood industry to the Nation as a whole. We will also provide the other businesses that depend on the seafood from the Gulf of Mexico to make their living. This data has never been collected before. If a Disaster should strike again we will have the true value and as an extra bonus of this proposal .Our science center will have the information and so will our fishery management councils that use this type of information in their management plans.		Yes	No	No	No	No	No	No		No		$ 5,000,000.00	$ -	
	Research and Education	5422	10/6/2015	Coordinated Strategy for Sea Turtle Recovery in the Gulf	NFWF and its partners, including managers from all five Gulf States, USFWS, NOAA, and NPS, as well as NGOs and science institutions, propose to restore Gulf populations of sea turtles through the following 3 strategies. This work builds on $3.8M in previous investments NFWF has made to bolster Gulf sea turtle populations since June 2010. 1) Bycatch Reduction - This two-part strategy is projected to save the reproductive equivalent of a minimum of 3,000 nesting females over five years: a) NFWF will provide free vouchers for 7,000 Turtle Excluder Devices (TEDs) to LA and AL fishermen to cover 100% of this fishery, and work with state managers to offer training and assistance on TED installation, and inspections and usability follow-up testing. b) NFWF will convene state and federal agents to standardize enforcement, data collection and reporting processes to create a Gulf-wide database; invest in the capacity of states to enforce the use of TEDs; and evaluate the results of increased enforcement. 2) Nesting Beach Restoration - This three-part strategy is projected to save the reproductive equivalent of 2,400 nesting females over five years: a) Predator Control: NFWF will establish a fund to invest $100,000 annually in predation reduction efforts on high density nesting beaches in FL and AL to maintain predation levels at or below 30% in perpetuity. b) Light Pollution Reduction: NFWF and the Sea Turtle Conservancy (STC) will minimize light pollution on 600 of the highest priority public and private properties along high density nesting beaches, and train county code enforcement staff to address lighting problems. c) Habitat Protection: NFWF and USFWS will protect 2.5 miles of priority nesting habitat (1,300 nests annually) within Archie Carr and Hobe Sound NWRs. NFWF, STC and U of FL will also pilot a new conservation easement to [strengthen protection of] existing nesting habitat on developed properties. 3) Critical Gaps in Science/Management - NFWF will mobilize scientists to address two critical research gaps that impact turtle recovery efforts: a) coordination of a 5-year study to identify priority habitats in the Gulf and to identify overlaying threats; and b) a pilot program to test new methods for turtle-friendly beach nourishment.		Yes	No	No	No	No	Yes	No		No		$ 58,600,000.00	$ -	
	Research and Education	5444	10/29/2015	Delisle Bayou Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. This parcel is located along Delisle Bayou in Harrison County, Mississippi and is part of the Delisle watershed. This parcel encompasses a significant oak grove that is home to several 800-year old live oak trees, as well as waterfront acreage to Delisle Bayou. Protection of this parcel would be essential in maintaining green-space within the surrounding community. This property would also serve as an outdoor classroom for nearby schools. Ecological Significance: -Historically significant in protection of 800-year old live oaks and habitats. -Creates open spaces that will provide areas for people to witness and learn about their natural environment. -Creates open spaces that provide opportunities for low impact recreational activity, such as bird watching and other wildlife observation, fishing, net-casting, and kayaking. -Protects emergent vegetation and subsurface vegetation that provides values required for wildlife to nest, rest, breed, and forage. -Provides critical wintering and migratory stop-over sites for migratory birds. -Protects near-by developed properties as a buffer area for storm surge by providing dispersal and displacement in a flooding event. These flood events have a natural function of turnover and flushing of coastal wetlands. The protected open spaces create an offset to protect community infrastructure.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5450	11/11/2015	Longleaf Pine / Water Quality Restoration Project	A project that would look to restore/enhance and protect longleaf pine and bottomland hardwood habitat in the six coastal counties of Mississippi. The restoration and/or enhancement efforts would improve water quality and habitat for many species of wildlife including some listed and threatened and/or endangered.	Pearl River, Stone, George, Hancock, Harrison and Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition

	Research and Education	5452	12/8/2015	TechTown Pascagoula	TechTown is a â€œtechnology and entrepreneurial learning center offering year-round after-school programs and summer camps.â€ TechTown provides skill-building and certification curriculum for five focus areas including robotics, programming, film and arts. In contrast to the original TechTown Chattanooga, the proposed TechTown Pascagoula would be a 5,000 sq ft extension center offering focus areas customized for the jobs in our community. TechTown has a strong emphasis on securing scholarships for underprivileged youth. In addition to youth programs, TechTown also offers technology focused programs for adults and seniors. A TechTown Pascagoula program would combat the documented recruitment needs of local industries who are spending countless hours travelling to recruit necessary workforce. TechTown Pascagoula would spark the interest of local youth region-wide in STEAM (Science, Technology, Engineering, Arts, and Mathematics) related jobs of which Pascagoula is fortunate to be plentiful in. A facility of this magnitude would be the first in the State and have a multi-county and multi-state draw. Headquartered in Pascagoula, it would serve as a great partnership with Ingalls, Chevron, Singing River Health Systems, the Pascagoula-Gautier School District, the City of Pascagoula, the Mississippi Gulf Coast Community College (MGCCC), and MGCCC's recent collaboration with Mississippi State University among unforeseeable others. Attachments include presentations explaining TechTown and the capabilities.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	50	Yes		$ 2,000,000.00	$ -	
	Research and Education	5453	12/11/2015	GoCoast Trust Fund	The proposed project will fund a perpetual GoCoast Trust Fund that will provide: (1) debt and equity financing of qualified private and public projects that will repay loans with interest and yield a return on equity investments; and (2) grants to public agencies for urgent public projects that do not generate revenue directly, especially eco-restoration projects. The Trust Fund will provide a long-term, economically-sound framework to stimulate regional economic recovery and growth that serves long-term public interests, and it will have the flexibility to adjust to market-driven changes in the regional, national and world economies. The GoCoast Trust Fund will be governed by a three-member Board of Trustees, composed of one resident from each of Hancock, Harrison and Jackson counties. The Governor shall appoint the trustees, subject to the approval of the Mississippi Senate and House of Representatives, for four-year terms, coterminous with the Governor. All actions of the Board of Trustees must be by unanimous vote of the Trustees. Operating expenses of the Trust may be funded from Trust Fund income and any public or private grants obtained by the Trust. On or before September 1st of each year, the Trustees shall submit to the Governor, the Legislature, and MDEQ (1) a â€œPlan of Investmentsâ€ for the next state fiscal year itemizing all proposed investments and projects for the next fiscal year, (2) financial statements of the Trust for the previous year, and (3) financial statements projected for the next five years. Prior to submitting each Plan of Investments, the Board of Trustees must submit the Plan to all state Senators and state Representatives representing any part of the three Coast counties. If a majority of Senators and Representatives submit an objection (in writing) to any specific project in the Plan, then that project shall be deleted from the list of projects that may be funded by the Trust in that fiscal year. The Trust will operate in the nature of a public investment bank to fund projects that address economic development; infrastructure; eco-restoration; research and education; seafood; tourism; or workforce development. Priority will be given to projects that stimulate and accelerate long-term, regional economic recovery and growth; job production; tax-base expansion; and quality of life for Mississippi Gulf Coast residents. Selection must be based on projects that, â€œbut forâ€ GoCoast Trust assistance, otherwise would likely not go forward within a strategic timeline and scope of development according to the long-term strategic plan adopted by the Board of Trustees. The operating office of the Trust shall be located within the three Coast counties. Preference will be given to projects that leverage financing from private sources and other public sources, including state and federal grants and incentive programs, such as New Market Tax Credits, Tax Increment Financing, Mississippi Tourism Rebate Program, Public Improvement Districts, Business Improvement Districts, and Community Development Financial Institutions, like the Gulf Coast Renaissance Corporation. Each project will demonstrate it has an economically sound basis for repaying the investment and, where feasible, yielding an appropriate return on investment. Although lending and investment criteria will be designed to perpetuate and grow the Trust Fund, the Board of Trustees will have the flexibility to set terms that may be less than market rate in order to incent timely, qualified projects that make long-term, systemic improvements to the regional economy and quality of life.	Hancock, Harrison and Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 100,000,000.00	$ -	
	Research and Education	5459	12/23/2015	Welcome Center / Tourism Center	Develop a site and construct a welcome/tourism center for the City of Pascagoula. The City has much to offer, and several large employers bringing visitors to the area. Often, these visitors miss the jewels of Pascagoula and Jackson County in favor of larger facilities in other nearby cities. A welcome / tourism center would provide meeting space, information about local attractions and facilities, and would complement other similar venues on the Coast.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	90	Yes		$ 5,000,000.00	$ -	
	Research and Education	5460	12/24/2015	National Diabetes and Obesity Research Institute	On December 24, 2015, the National Diabetes and Obesity Research Center and Tradition-Medical City submitted Project #5460 to the RESTORE Project Portal. The information below is an update to Project #5460 based on a recent study and updated design and building estimates. The National Diabetes and Obesity Research Institute (NDORI), a Mississippi (MS) non-profit 501 (c)(3) corporation, is an innovative, translational research institute focused on the population-based study and treatment of diabetes and obesity, currently in its infancy. The singular focus of NDORI is to find a cure for diabetes - a disease that impacts more than 15% of MS's population. NDORI is located at Tradition, a 4,800-acre master-planned community in Harrison County at the intersection of Highway 67 and Highway 605 north of Biloxi and Gulfport. NDORI represents a unique opportunity to invest in the long-term health of the state, position the MS Gulf Coast as a regional leader in the growing health and life-sciences industry, create a catalyst for exponential economic growth, and promote community stability through development and investment. The concept would be one of the cornerstones of a healthcare, bioscience cluster: the Tradition Medical City. In spring 2018, Southern MS Planning and Development District (SMPDD) commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern MS to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; the final product of this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippi." Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development, and a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for future growth of NDORI and Tradition based on the success of other existing healthcare clusters at Lake Nona, FL, and the Research Triangle Park in NC. Based on these findings, NDORI and Tradition will make the MS Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the state and region. NDORI is strategically located in MS and serves as a natural laboratory positioned to address the effects of diabetes and obesity at the epicenter of incidence. The result of the investment in diminishing health disparities will have far-reaching impact in reducing health-related costs of Mississippians and the associated healthcare costs encumbered by the state. Consider the following statistics, in 2016 over 371,622 Mississippians had diabetes (over 15.4% of the state population). MSâ€™s diabetes rate nearly doubled that of the global rate and was significantly higher than the 10.5% national rate. It has been predicted that by 2035 the global population with diabetes will increase to 600 million. With nearly 1 in 6 Mississippians affected by diabetes, the cost to the state at $3.5 billion annually is enormous. The result is weak worker productivity, high poverty rates and low labor participation. NDORI and the additional medical development in the Tradition Medical City will serve to create the potential for significant economic savings to the state. NDORI will serve as a catalyst for economic growth, community stability and community resilience by providing or supporting a diverse offering of educational opportunity for residents of the state as hospitals, universities, research institutions and health and life science companies are engaged or locate in the development. This type of development will serve to strengthen the state and Gulf Coast's economic health through creation of high-value jobs, creation of middle-skills jobs to promote growth of the middle-class, creation of educational opportunities that result in highly-skilled	George, Harrison, Forrest, Pearl River, Jackson, Mobile, St Tammany, Stone, Hancock	Yes	No	Yes	Yes	Yes	No	Yes	81	Yes		$ 57,000,000.00	$ -	
	Research and Education	5464	1/25/2016	Highway Connectivity Project for City of Moss Point	A project to provide ease of transportation, accessibility and safety along the Interstate 10, Highway 63 and Highway 613 corridors from Old Saracennia Road north of 1-10 to McInnis Avenue and Grierson Street south of I-10. 1. Interchange improvements and extension of service roads along with service road improvements along the I-10 and Hwy. 63 and 613 corridors. 2. Transform the Pascagoula Street/River Road/Griffin Street/Dantzler Street corridor into a major improved connector between Hwy-90 and Hwy-613, with widening, turning lanes, improved drainage, resurfacing, lighting, etc. 3. Widening and improvements along Grierson & McInnis Ave. from Hwy-63 to Main St. (Once Hwy. 90) to create greater access and increased flow to downtown from the east. Also include a stop light and cross walk at McInnis & Main and straightening and widening of McInnis in front of City Hall with added parallel parking. 4. Turning lanes and a traffic light at Hwy-613 and Dutch Bayou Road to create a new main entrance and exit at the Pelican Landing Conference Center, at the intersection. 5. Extend Audubon Way eastward across Main Street to Morris, creating a new intersection and creating commercial development opportunities.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ -	$ -	
	Research and Education	5465	2/16/2016	Computerized RESTORE	Developing Working Proposals to hire University Researchers and Marketers to address the RESTORE act and present the proposal 100% into dimensional sections for fundamental learners comprehensive training and developmental studies in progress. Each University Researcher that provide a biographical sketch, resume, CV etc. will be assessed to his or hers RESTORE ACT decision making teams. There will be implementation of US Military and International interventions and redesian ROTC Workforce Innovation Trainina and Develoament.		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 18,000,000.00	$ -	
	Research and Education	5466	3/2/2016	Long Beach Handicapped and Wounded Warrior Baseball Complex	This project consists of the development of a baseball complex designed specifically for handicapped and Wounded Warrior persons. There will be three Miracle League Fields, one concession stand, two parking areas and a signed and landscaped entrance. The total cost of the project will be approximately $2 million. 3 fields @ $500,000 each $1,500,000 1 Concession Stand $ 150,000 2 Parking Areas $ 200,000 Signed and Lanscaped Entrance $ 100,000 GRAND TOTAL $1,950,000 The project will be located on publicly owned land at the existing site of the Long Beach Senior Center and baseball park.	Harrison	Yes	No	No	Yes	No	No	No		No		$ 2,000,000.00	$ -	
	Research and Education	5468	3/28/2016	Rutherford Fishing Pier Extension	Bay St. Louis proposes to construct/extend the Rutherford Fishing Pier which is located at the Municipal Harbor. The existing pier is approximately 1,200 LF in length and is well known in Hancock County as one of the best locations for pier fishing. Due to its reputation as a fishing hot spot, the designated fishing areas are consistently crowded and demand for fishing from piers is at an all time high. This project will extend the fishing area approximately 500 LF and add an open air fishing platform approximately 50' x 75'. This structure will enhance the regional tourist attraction and amenities for the BSL Harbor and will increase the use and public access to the water for recreational use.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 1,500,000.00	$ -	
	Research and Education	5469	3/29/2016	Day Pier Extension	Bay St. Louis proposes to extend the existing Day Pier which is located adjacent to the Rutherford Pier at the Municipal Harbor. The Day Pier is used daily to dock local transient vessels which frequent the nearby downtown establishments. The current pier is approximately 200 LF in length can not support the amount of vessels which frequent the area. The extension would add an additional 400 LF of docking space and enhance and support local and regional tourism efforts.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 300,000.00	$ -	
	Research and Education	5470	3/29/2016	Pedestrian Access Ramp	Bay St. Louis proposes to construct an pedestrian access ramp near Demontluzin St. which would provide ADA access from the downtown area to the BSL Harbor and Rutherford Fishing Pier. This access point is necessary to allow a safe method for tourists to access the harbor and fishing pier. The access ramp will provide public access to enjoy the recreational benefits of the harbor and fishing pier.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 150,000.00	$ -	
	Research and Education	5472	4/14/2016	Bay St. Louis Natatorium	Bay St. Louis proposes to construct a public natatorium to consist of handicap accessible showers, handicap accessible swimming areas, locker rooms, 50 meter by 25 meter Olympic size swimming pool and multipurpose room. The facility will provide public access to swimming facilitates, swim lessons, partnerships with local school districts for use by swim teams, increase tourist attractions for visitors as well as hosting state and regional swim meets and provide additional activities for local youths.	Hancock	Yes	No	No	Yes	No	No	Yes	10	Yes		$ 5,000,000.00	$ -	
	Research and Education	5473	4/14/2016	Bay St. Louis Public Beach Access	Bay St. Louis proposes to construct public access points along Beach Blvd to the public sand beach at Carroll Ave and Ulman Ave. These access points will be ADA accesible and consist of concrete walkway, timber decking, timber ramp, galvanized steel support structure, lighting, benches, etc. These access points will provide more access for public use of beach for recreational functions.	Hancock	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 500,000.00	$ -	
	Research and Education	5476	4/20/2016	Horn Island	As part of the Gulf Islands National Seashore all available acres on Horn Island needs to be purchased to preserve the natural importance of untouched sand, dunes dotted with sea oats, tall pines on small groves, and a few inland lagoons. This magnificent Island is the result of a marvelously rich ecosystem that serves as home and nursery for an enormous array of sea life. It is home to varied wildlife including alligators, ospreys, pelicans, ducks, tern, herons, and other migratory birds. The Sound and the Gulf host innumerable species of sea life. The island is undeveloped, and is a favorite boating destination for those living on the Mississippi Gulf Coast.		Yes	Yes	No	Yes	No	Yes	No		No		$ 2,850,000.00	$ -	

	Research and Education	5480	4/29/2016	Oyster Restoration through Aquaculture - Aqua Green	In Mississippi and throughout the Gulf of Mexico, the oyster fishery serves as an integral part of the economy and heritage of coastal communities. Events over the past decade such as Hurricane Katrina and numerous anthropogenic events (e.g., spillway openings, oil spill, etc.) have, however, impacted those resources in Mississippi and caused significant reductions in oyster landings and the amount of viable oyster reef habitat present. Identified as a priority by the Governorâ€™s Oyster Council (Council), USM proposes to continue its research and development in the production of eastern oyster larvae in an artificial seawater, recirculating aquaculture system to incrementally scale up larval production to provide a consistent supply of healthy oyster larvae for purposes of restoration and economic development. This supply of larvae will directly support: (a) restoration of the Stateâ€™s public reefs and expansion of private leases to increase annual oyster harvest numbers; (b) creation of living shorelines and reestablishment of natural non-harvest reefs for shoreline stabilization/marsh restoration, fishing habitat, and water quality enhancement; and (c) off-bottom culture (â€œoyster farmingâ€) for expansion of the Stateâ€™s commercial oyster fishery. To support these restoration objectives and achieve the Stateâ€™s goal of ten billion eyed oyster larvae annually, acquisition of the Aqua Green aquaculture facility in Perkinston, MS, and retrofitting/expansion of systems there is necessary to provide a platform for this large-scale larval production. Aqua Green was identified by the Councilâ€™s Hatchery Sub-Committee as the recommended hatchery to support Mississippiâ€™s oyster restoration because of its inland location out of harmâ€™s way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	77	Yes		$ 13,000,000.00	$ -	
	Research and Education	5482	5/4/2016	USM Ocean Enterprise at the Mississippi Aquarium	Background The maritime â€“ Blue Economyâ€™ is the largest sector of Mississippi economic activity and includes shipbuilding, shipping (and related), fishing, tourism, defense (and related), and construction activities among many others. New and very large investments are being made to capitalize on this growth potential. We propose to centralize the connections between this massively important state investment with the investments the University has made in marine and fisheries research; business and entrepreneurship; construction; and trade, transportation and logistics. Need Given the magnitude of the investments made by both the state and the University, there is not a centrally located access node to intersect needs of economic development with the intellectual capacity of the University. The nation is full of examples where critical mass has been reached by providing facilities at the nexus of industry, academia and agencies; clearly, these intersections create new and exciting opportunities and push the boundary of innovation. The State of Mississippi needs such a place, and we propose a state-of-the-art facility called The University of Southern Mississippi Ocean Enterprise to be located adjacent to the Mississippi Aquarium in the heart of Mississippiâ€™s Blue Economic Development of Gulfport. Opportunity Through Ocean Enterprise, USM will develop and concentrate expertise in the areas of marine research, economic development, entrepreneurship, trade, logistics and transportation. We will place world leaders in research and education in the facility, and give them access to state and federal partners and to leaders in economic development and private industry. In the facility will be research and education spaces for training tomorrowâ€™s leaders, collaborative spaces to solve the regions most critical problems and community spaces to bring all of the citizenry to the table.	Harrison	Yes	No	Yes	Yes	Yes	Yes	Yes	28000000	Yes		$ 28,000,000.00	$ -	
	Research and Education	5485	6/1/2016	Restore the Coastal Tree Canopy Strategies & Storm Preparedness and Mitigation	Restore the Tree Canopy will work with every city and county in the three coastal counties to identify perpetual public green spaces and enhance those spaces with trees varieties that are sustainable. This project can also work with previously approved RESTORE project to ensure that urban forestry is included in site development. The sites that we work with will be identified by either they city or approved restore project locations such as the conservation green ways or other projects approved. This project will help make-up for or mitigate the natural resources of trees that support habitats of all kinds including native birds, reptiles, and other species. Plus matched and enhance economic benefits. The project will include benefits for people and wildlife. The results will be a series of arborvitae creating a linear coastal green spaces for benefits such as eco-tourism recreation, clean air and water, storm water management, shade, increase property value and many other related benefits. Restore the Tree Canopy Strategies Habitat, Water Quality, Community Resilience Submitted by Donna Yowell, Executive Director of the Mississippi Urban Forest Council 601-672-0755 â€œRestore the Canopy Strategiesâ€ is a project that meets all five of the overarching framework goals of Restore the Gulf. This project will focus on collaborative and sustainable tree planting strategies and activities for local government, citizens, and NGOâ€™s. The project will include ways the community and individuals can actively participate, building knowledge, resilience, conservation activities, and ownership. Communities will learn the benefit of connectedness, to a healthy Gulf, based on actions within their own community. Stakeholder engagement and wide spread collaboration would be another focus. Trees have proven their natural capital to tourism and community economic enhancement, as well. Restore the Canopy is comprehensive in being a Mississippi coast wide project and will cover all three coastal counties with a recommendation to include the other 3 counties in the lower tier of Mississippi. The project will include all cities and counties officials plus local civic groups such as chambers, youth groups, and all other civic groups. This would be a landscape level restoration effort along coastal streams, targeted shore lines, and watersheds; implementing a strong green component and collaboration for involvement. *Initiate community based efforts to increase the awareness of the importance of coastal resources and the best management practices to support conservation and renewal of the valuable assets. *Restore water quality *Restore ecosystems.	George,Harrison,Jackson,Stone,HancocHarrison, Jakson and Hancock,Pearl River,Mobile,St Tammany	Yes	No	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 450,000.00	$ -	
	Research and Education	5488	6/15/2016	Pearl River stream flow monitoring	The lower Pearl River system is a rich and diverse ecological system that is home to a variety of aquatic and terrestrial species, including several on the endangered species list such as the Gulf Sturgeon. The hydrologic system is a braided system of major and minor channels and it is heavily influenced by several man-made structures including a canal with two low-water sills and three lock systems on the west Pearl River, and a low-water weir on the east Pearl River, all of which have altered the natural flow characteristics of the system. Most of the flow comes from the Pearl River itself, which drains more than 6,700 square miles above Bogalusa, LA. Additional inflows from the East and West Hobolochitto Rivers in Mississippi and Bogue Chitto in Louisiana contribute some flows. Heavy precipitation events in the coastal region of these tributaries can be primary contributors to the flow in the region. In these instances, the hydrologic flow models generally used for forecasting are not nearly as accurate since they are developed with flows from the Pearl River being the major contributor. The transfer of ownership and possible removal of the canal, locks, and sills are the subject of ongoing discussions between federal, state, and local agencies. Some hydrologic and biologic data are currently being collected in the system, but none of those currently being collected integrates the cumulative streamflow of the system. Additionally, data are not currently being aggregated and housed in one central location to facilitate ease of access. Furthermore, little to no comprehensive background data, streamflow or water quality, exist to document changes to either flow patterns, suspended-sediment transport, or water quality of the area. The purpose of this project is to collect water level, velocity, and instantaneous discharge data and use these data to compute the flows from the Pearl River at U.S. Highway 90 in Hancock County, MS. Instrumentation will be installed on the bridges over the east and west Pearl River channels to collect stage and velocity data to compute the instantaneous discharge in the channels. Discrete stream flow measurements will be collected at the 5 bridges on the lower Pearl to determine the flow distribution between the channels. The computed discharge data will be filtered using a tidal filter to compute the daily flows in the river at the U.S. Highway 90 crossing. Additionally, stage and velocity data will be collected at the CSX Railroad bridge crossing at the mouth of the river to compute the flows through that channel to augment the collection of water quality data at that location. These data will allow the impact of the flows from the tidal fluctuations on the distribution of the headwater flows to be analyzed. The cost to obtain the equipment needed for the collection of time-series data at two locations, and add a velocity sensor at the third, is $75,000. Data will be collected for 5 years, at $70,000 per year, which will allow for the data to be used in statistical computations as needed. Additionally, and of significant importance, the installation of the monitoring equipment at the U.S. Highway 90 crossing is expected to significantly improve the ability to forecast flood events on the lower Pearl River.	St Tammany,Hancock,Orleans	Yes	Yes	No	No	No	Yes	Yes	20	No		$ 425,000.00	$ -	
	Research and Education	5489	6/21/2016	Clermont Harbor Acquisition and Restoration	Clermont Harbor once featured a stately resort in western Hancock County built in 1915, with paddleboats, a dance pavilion, gates to the community, a pier and boat harbor. It was heavily damaged by the 1915 hurricane, then rebuilt, and finally burned in 1946. Since Hurricane Katrina, many of the homeowners surrounding the Harbor have not returned, leaving a large swath of land untended. Renew Our Rivers efforts to clear hurricane debris from the last fifty years have been an important step toward improving water quality. The harbor connects to the Mississippi Sound through large culverts, instead of the open channel for boats that is once sported. However, it still acts as a marine nursery for fish and shellfish. Restoration of the marsh edge, buffer plantings to filter stormwater, and reforestation of the site will improve the marine and human habitat along its edge. The project request is for acquisition and permanent conservation of adjacent lands, from willing owners. Those lands will be made accessible for public access to the waterway, and will support nature-based tourism with low-impact improvements including: recreational trails, a pavilion, interpretive signage, restoration of the Clermont Harbor pillars, and a kayak launch.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		No		$ 250,000.00	$ -	
	Research and Education	5490	6/24/2016	Land Acquisition for expansion of Grand Bay National Wildlife Refuge and National Estuarine Research Reserve	This effort seeks to permanently protect lands identified by the U. S. Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management by the Grand Bay National Wildlife Refuge (NWR) and Grand Bay National Estuarine Research Reserve (NERR). This project will add approximately 1,686 acres to the nearly 18,000 acres currently owned by the U.S. Fish and Wildlife Service and the State of Mississippi. It will add critical coastal lands to the Grand Bay NWR/ NERR for permanent protection, and improved management of coastal wetlands, and adjacent upland areas. The Grand Bay NWR/NERR protect one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The targeted 1,686 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt pannes, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay Refuge/ NERR include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of the Grand Bay NWR/NERR will also expand public recreational access, research, education, and training opportunities in this unique coastal environment. The Conservation Fund has initiated due diligence with financial assistance from the Knobloch Family Foundation, is in discussions with the landowner regarding acquisition of these tracts, and anticipates that the project could be completed immediately, pending availability of funds.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5494	7/6/2016	SRHS Infrastructure	Portions of the environmental infrastructure of our two hospitals are in excess of 40 years old and are failing. Other environmental utilities such as water utilization, electrical switch gear, and lighting for both acute care hospitals as well as our clinics are using technology that is costing hundreds of thousands of dollars a year more than their modern, energy and resource efficient counterparts. SRHS is proposing to replace failing components such as the SRH cooling tower and electrical switch gear, as well as the inefficient lighting, components of the OSH chiller, OSH boiler plant, and several air handler units at OSH, with modern counterparts that will save SRHS approximately $400,000 a year in operating expense. The cost of the project is estimated at $7,800,000.00, with an ROI of less than 20 years and a projected life in excess of 30, producing a net return on investment in excess of the cost of the project. SRHS is seeking capital funds for this project.	Jackson	Yes	No	No	Yes	Yes	Yes	Yes	100	Yes	healthcare	$ 7,800,000.00	$ -	

	Research and Education	5497	7/12/2016	Restore Project Video Production and Broadcast	It is important that the public be educated as to how the Restore Act funding was allocated to mitigate damage caused by the Deepwater Horizon oil spill. Much of the effort underway is directed at projects with results which will not be readily visible to the general public. The Wilem Group (TWG) proposes to incorporate video segments into its television show Gulf South Outdoors in a manner that shines a light on the Restore progress while still offering enjoyable and entertaining and objectivity not possible if done directly by the State. Gulf South Outdoors has been on the air for 15 years and now reaches 30 million households in most major cities nationwide. The company produced a show episode which focused on the efforts of Mississippi Powerâ€™s â€œRenew Our Riversâ€ project. The show filmed an alligator hunt on the Pascagoula River then segued into the volunteer cleanup effort to stress the importance of being good stewards of our natural resources. The result gave our sponsor well-deserved visibility for their conservation initiative. Similarly, Gulf South Outdoors filmed a duck hunt and then segued into the Nature Conservancyâ€™s ongoing project to restore the Mathews Brake wetlands. In both instances, the intent was to offer viewers an enjoyable outdoor show while highlighting important conservation programs. Many of the Restore Act projects which have been completed or are underway would be ideal for the same type of treatment. A fishing trip for inshore species could be targeted in an area where Restore Act funds were used to construct an artificial reef or restore a shoreline in an estuary. The show would feature fish being caught and then interview the appropriate Restore Act representative to explain how the featured habitat had been created or improved. Cost for this project to highlight six Restore Act projects is $126,000 for one year with the option to continue funding at this same level for up to four additional years. Funding requested herein would be used: - To jointly identify the 6 (six) best projects to showcase. - Conduct interviews with appropriate personnel. - Shoot video of the project status documenting stages for those currently underway. - Produce a video segment of each selected project to incorporate into an episode of Gulf South Outdoors. - Air the show nationally to 30 million households. - Develop standalone segments for use by the State in its public relations efforts.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		No		$ 126,000.00	$ -	
	Research and Education	5503	7/18/2016	Center of Hope	The Center of Hope "A Place Called Home" will be a facility serving homeless families and single men and women (some of them veterans) on the Coast of Mississippi in Gulfport. The Center will be a 28,500 sq ft facility, providing 120 beds, multipurpose room and kitchen, administrative offices, meeting rooms, child play/study areas and a chapel. This is a transitional housing center that will provide homeless residents a safe, secure location to get back on their feet. We will evaluate them on a case by case basis to determine their overall needs. We are partnering with several different groups and organizations to give them the tools needed so they can be productive members of society.		Yes	No	No	Yes	Yes	No	Yes		No		$ 5,700,000.00	$ 4,500,000.00	
	Research and Education	5504	8/1/2016	Grand Bay NWR & Mississippi Sandhill Crane NWR Restoration Project	This proposal consists of habitat restoration and enhancement work on Mississippi Sandhill Crane National Wildlife Refuge (NWR) and Grand Bay NWR, which are part of the Gulf Coast Refuge Complex. These refuges contain a wide diversity of habitats ranging from ecologically important pine-savannas to cypress-tupelo swamps. This project will consist of three components: (1) Pine-savanna restoration at Grand Bay NWR, (2) Aerial waterfowl surveys over Grand Bay NWR and other areas of the Mississippi coast, and (3) Enhancement of waterbird habitat at Mississippi Sandhill Crane NWR. The pine savanna restoration work on Grand Bay NWR will include prescribed burning, invasive and exotic species control, and mechanical treatments. Restoration activities will be monitored to ensure that desired results are achieved. The second component of this project includes biannual aerial waterfowl surveys with the goal of assessing waterfowl populations on Grand Bay NWR and other areas of the Mississippi coast. The third component of the project will include enhancement of wetland habitat on Mississippi Sandhill Crane NWR. Ducks Unlimited will construct one moist soil impoundment on former wastewater sprayfields to benefit waterfowl, waterbirds, shorebirds, cranes, and other priority species. The project includes invasive species control and native grass planting on approximately 300 acres of sprayfields surrounding the impoundments to restore savanna habitat.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 2,902,772.00	$ 17,775.00	
	Research and Education	5505	8/11/2016	Gulf Coast Institute for Minority Leadership in Natural Resources	The Deepwater Horizon Oil Spill caused lasting ecological and socio-economic impacts in Gulf of Mexico (GM) and adjacent land resources. Efforts have been initiated to restore impacted ecosystems. Such restoration efforts will be long-term and itâ€™s imperative that a well-trained cadre of biologists with leadership skills exists to ensure that such restoration efforts continue, are consistent, ensure multiagency cooperation, and fulfill long-term goals. Itâ€™s imperative that demographics of these leaders are consistent with coastal constituencies. However, demographics of individuals in leadership roles in natural resources donâ€™t reflect the citizenry of Gulf Coastal States, nor even the U.S. The population of counties bordering GM was 12,523,710 individuals, representing 20.1% of population of the 5 Coastal States. Of these >12 million citizens, 42.6% are minorities, with 17.4% Black, 0.6% Native Peoples, 2.7% Asian, and 20% Hispanic/Latino. Natural resources in coastal counties adjacent to GM are critically important socio-economically and ecologically. Many state and federal agencies are charged with conserving these resources and itâ€™s imperative that those with leadership roles of these agencies reflect the citizenry who need these resources. Itâ€™s not sufficient to simply recruit minority leaders from universities. Their unique skills must be identified and nurtured during their B.S. education. There also exists many young professionals employed by federal and state agencies, who are candidates for leadership roles, and would benefit greatly from advanced training in leadership. Most of these professionals likely graduated from a traditional natural resources B.S. program. These programs emphasize organisms and habitats, and do not allow those select individuals to express and build on inherent leadership skills. Itâ€™s regrettable that most B.S. programs in natural resources in the U.S. emphasize animal and habitat management principles, with less focus on developing leadership skills. However, there is always a subset of individuals who display skills in leadership such as being presidents of professional organizations. The organismal and habitat emphases of university curricula often do not allow these â€œfuture leadersâ€ to develop and build their inherent leadership skills. Individuals displaying these unique skills must be identified and â€œnurturedâ€. Mission Statement: Identify and train a subset of highly motivated professionals within natural resource management agencies and undergraduate students representing the 4 key minority groups within the Gulf Coastal States to understand federal and state government operations, federal and state policy development, administration, media interaction, advanced public speaking, conflict resolution, professional conduct emphasizing ethics, and financial accounting. Program Structure: The Mississippi State University Extension Service will be the coordinator of the program and will house the Institute. The Institute will have 2 units: Adult Professional Training and Undergraduate Training. The Adult Professional Training unit will instruct young minority professionals employed in state and federal agencies to expand their leadership skills. The second unit will entail establishing agreements with each land grant university within the Gulf Coast region to identify and train those minority students displaying leadership. Identifying employed minority professionals will first involve, annually, contacting current administrators of all natural resources management federal and state within the Gulf Coast, and soliciting names of individuals they feel display innate leadership and would benefit from advanced training in leadership and knowledge of how government operates via an internship in Washington, DC. The second unit will address training future leaders via undergraduate students. The key to successful recruitment of minority students into natural resources administration includes 4 cornerstones:		Yes	No	No	No	Yes	No	No		No		$ 15,662,208.00	$ -	
	Research and Education	5508	8/17/2016	Keegan Bayou Waste Water Treatment Plant Improvements for the Collection and Treatment of Seafood Industry Discharge	As part of the comprehensive public and private effort to improve water quality in the Back Bay of Biloxi before it reaches the Gulf of Mexico, the City of Biloxi is requesting RESTORE funding to reroute seafood processing byproduct discharge and treat it at the Keegan Bayou Waste Water Treatment Plant. This project will result in benefits to the public by preserving existing levels of business and spurring expansion of the local seafood industry operating on the Back Bay while significantly enhancing water quality through more efficient collection and treatment of industrial discharge. The proposed discharge collection and treatment improvements will provide a well-coordinated system to more expeditiously improve Back Bay water quality by exceeding National Pollutant Discharge Elimination System permit requirements for existing processors while allowing the cost-effective growth of Biloxiâ€™s seafood industry. This project complements the City of Biloxiâ€™s RESTORE Project #5399, Back Bay of Biloxi Festival Marketplace and Marinas, which requests funding to revitalize the seafood industry through public improvements that include expanded commercial dock space and supportive landside amenities. Project #5399 also includes incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program in partnership with the Mississippi Department of Marine Resources. The two projects will be coordinated to enhance traditional working waterfront activities on the Back Bay with a variety of land uses that showcase Biloxiâ€™s rich cultural history as the former â€œSeafood Capital of the Worldâ€through shopping, dining, entertainment, and educational venues. These authentic, family-oriented activities will help grow the regional tourism industry in concert with activities to revitalize the seafood industry. The two RESTORE projects also will work together to meet federal and state water-related public health goals of the Clean Water Act to support present and future most beneficial uses for the propagation and growth of aquatic life as well as public water supply and public recreational uses. Implementation of both projects will have significant near-term as well as long-term positive impact upon Back Bay water quality, wetlands conservation and recreational safety and appeal. In collaboration with the Harrison County Utility Authority and the Mississippi Department of Environmental Quality, the City of Biloxi will design the discharge collection and treatment project to address projected levels of increased discharge from anticipated seafood industry expansion. Best management practices will be used throughout project implementation and operation.	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100	Yes		$ 25,000,000.00	$ -	
	Research and Education	5518	10/17/2016	Elevating the profile of the Mississippi shrimp industry: a post-oil spill Fishery Improvement Project to advance and promote the sustainability of the Mississippi shrimp fishery.	Sustainability projects are the status quo in the seafood industry. The supply chain is being pressured to provide assurances that the product is sustainably harvested. Policies at companies such as Wal-Mart, Sysco, and Whole Foods are very specific and may block product that cannot demonstrate compliance. Despite being harvested under robust U.S. fishery management, most retailers require third-party verification through certifications or fishery improvement projects (FIPs). This proposal seeks to continue developing a FIP for the Mississippi (MS) shrimp fishery to elevate the fisheryâ€™s profile following a tarnished reputation from the Deepwater Horizon Oil Spill. The project has four tiers: 1.Assessment â€“ Sustainability pre-assessments to internationally accepted standards are the basis for FIPs. Some retailers specifically require a Marine Stewardship Council (MSC) assessment. This project will fund an MSC pre-assessment and the transition to a â€˜Comprehensive FIPâ€™ (see Conservation Alliance for Seafood Solutions). G.U.L.F. has recruited stakeholders for a FIP Committee to develop a time bound Work Plan verified by a third-party certifier. Over three years, G.U.L.F. will facilitate meetings of the Committee to track progress of the Plan. 2.Gear inspection â€“ Industry education about turtle excluder devices (TEDs) and bycatch reduction devices (BRDs) is an existing action of the FIP. A major concern in the Gulf of Mexico shrimp fisheries is interaction with endangered sea turtles. In federal waters, vessels are required to carry TEDs and BRDs, and non-compliance with regulations can cause a fishery closure if it passes a set threshold. The project will fund a Gear Inspector to conduct courtesy checks, ensuring TEDs and BRDs are properly installed, reducing the rate of sea turtle capture and the likelihood that fishermen carry non-compliant gear. 3.Industry Outreach: Inshore fleet â€“ Skimmer trawls are currently exempt from federal TED requirements if they adhere to tow time limits (50 CFR 223.206(d)(3)). NOAA is drafting an Environmental Impact Statement for potentially eliminating the TED exemption rule. G.U.L.F. will monitor this rule change, regularly update the MS shrimp industry, and educate industry members on how to submit comments through the rulemaking process. BRDs are not required in state waters. G.U.L.F. will continue to educate harvesters on benefits of BRDs and encourage voluntary use to further minimize bycatch. 4.Consumer Outreach â€“ To communicate the progress of the MS shrimp industry and its devotion to sustainability, G.U.L.F. will attend conferences and education events in MS and across the country, distribute materials encouraging consumers to purchase MS shrimp, and recruit restaurants to join the Restaurant Partnership Program, which encourages them to source domestic seafood and empowers wait staff as ambassadors for the industry.	Harrison,Jackson, Hancock	Yes	Yes	No	No	Yes	No	No		Yes		$ 391,073.00	$ -	

	Research and Education	5519	11/13/2016	EFFECT OF ANTHROPOGENIC NOISE ON THE HABITAT USE AND BEHAVIOR OF MARINE MAMMALS AND SEA TURTLES IN MISSISSIPPI WATERS	Lead Institution:ÂMississippi State University (MSU), Mississippi State, MS Collaborating Institutions: Institute for Marine Mammal Studies (IMMS), Gulfport, MS Naval Research laboratory (NRL), John C. Stennis Space Center, MS Project Duration:5 years Project Cost:$2,000,000 per year (MSU: $1,100,000 per year; IMMS & NRL: $900,000 per year) INTRODUCTION: The interaction between anthropogenic (resulting from human activity) sound, marine mammals, and other species has been identified as a key subject both by the Marine Board-European Science Foundation (ESF) and the US National Science Foundation (NSF). While there are no laws or regulations that specifically address the effects of anthropogenic noise on marine life, there are pieces of legislation (e.g., the Marine Mammal Protection Act and the Endangered Species Act) that provide avenues for approaching the issue. Human-generated noise has recently become a concern for the National Oceanic and Atmospheric Administrationâ€™s (NOAA) National Marine Sanctuary Program and has been an ongoing issue outlined in a study conducted by the Ocean Studies Board of the National Academies of Science and Engineering. The Mississippi Gulf Coast (MGC) is home to a thriving oil and gas industry, recreational and commercial fisheries, commercial shipping, and military exercises. Still, all of these activities are known to produce anthropogenic sound into the aquatic environment, possibly impacting marine life (Romano et al., 2004; Samuel et al., 2005; Tyack, 2009). Currently, the extent of the impact of sound produced by these industries on bottlenose dolphins (Tursiops truncatus) and Kempâ€™s ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound is unknown. The effects of anthropogenic noise on marine mammals are diverse could include hearing loss, alterations in feeding patterns, breeding behavior, and changes in migration patterns (Environmental Investigation Agency, 1998). Anthropogenic sound can also cause masking and threshold shifts in marine mammal hearing. Masking is defined as the level the sound must reach relative to ambient noise before it can be distinguished by the animal. Increased ambient noise levels may therefore â€œmaskâ€ sounds that are important to marine mammals and other organisms (Richardson et al., 1995; Southall et al., 2000). Both temporary threshold shifts and permanent threshold shifts are the result of an elevation of an animalâ€™s hearing threshold, as a result of exposure to intense sound (Schlundt et al., 2000). Threshold shifts can alter an organismâ€™s absolute ability to hear, as opposed to the drowning out of sound, by other sounds seen in masking. Threshold shifts also occur in the presence of ambient noise and masking (Finneran et al., 2000). Threshold shifts may be temporary, during cases in which an animal's hearing ability returns to baseline levels, or they may be permanent.	Harrison,Jackson, Hancock,St Tammany	Yes	No	No	No	No	No	No		No		$ 10,000,000.00	$ -	
	Research and Education	5524	12/9/2016	Provide Daily Ocean-Weather reports to local news channel and Harbor Masters along the Mississippi coast.	a)The project will provide daily graphic display of Ocean and atmospheric conditions in the Mississippi sound and shelf to the local harbor masters and coastal managers and the public. Ocean-weather includes winds, ocean currents, water quality and clarity (diverâ€™s visibility), ocean temperature, water turbidity, and additional ocean conditions at a spatial and temporal resolution not presently available on a daily time schedual. Visual products from these data would be provided from now-cast oceanographic models and satellite imagery on daily bases that can be made public through the University of Southern Mississippi (USM) Ocean Weather Laboratory. Harbor Masters require daily updates to the local ocean conditions so that ships operations can be performed accurately and safely. This capability will enhance the coastal operations for safety and commercial applications and support the growth of port activity along the coast. b)Our local coastal community will be provided with local ocean-weather conditions for the Mississippi coastal waters to support commercial utilities such as fisheries, recreational boating, beach conditions, water clarity and turbidity plumes swimming and diving purposes. Ocean-weather products will be a major extension of the local weather conditions reported on the television news. Conditions will be reported daily on websites and sent to daily television news. The public will be informed of local ocean conditions, so they can take advantage of present research capability at USM. Public awareness of ocean conditions will increase ocean activities along the Mississippi coastal waters. This capability will provide both improved safety on ocean conditions and improve occupation and activities on our coastlines. Areas for recreation fishing, boating, diving etc, will be improved. Local water quality will be reported to the Mississippi Department of Environmental Quality and Department of Marine Resources, so they can inform the news and public about water safety conditions along the coast. Unsafe conditions could be related to public safety for beach users and fisherman include harmful algal blooms or contaminated waters. The Ocean Weather Laboratory at the USM will assemble satellite products and model products to provide a unique capability for visualization of ocean activity in the Mississippi Sound, Shelf and offshore waters. These ocean-weather conditions will provide the public a new capability for monitoring and overseeing our coast and provide improved safety and public health response and management operations. These ocean weather data can be used to support the coast guard for tracking movement of debris and support search and rescue in the Miss sound and shelf.	Hancock,St Tammany,Mobile ,Jackson,Pearl River,Harrison	Yes	No	Yes	Yes	No	Yes	Yes	10	No		$ 200,000.00	$ -	
	Research and Education	5525	1/1/2018	Nature Tourism Proposal for the Mississippi Gulf Coast Region: A project and budget plan based on the 2016 process and strategy document,	Tourism and business leaders have realized the necessity of creating an environment of conservation and protection of Mississippiâ€™s coastal resources in the wake of the Deepwater Horizon Oil Spill in the Gulf of Mexico. A great deal of planning has taken place since 2010 to celebrate the natural beauty and wonder of the Mississippi Gulf Coast. There is an area of opportunity in this region that is a most promising method to protect natural resources and promote environmental stewardship while stimulating new economic development. Across the world, nature tourism is recognized as a significant effort to provide responsible travel to natural areas and promote conservation. Nature tourists are looking for original and authentic experiences to high-quality environments with historical and cultural significance. These travelers are more likely to be well educated and travel often in multi-generational groups with extended families. They are seeking safe, well-connected communities that place emphasis on environmentally and culturally responsible travel with low visitor impact to natural areas. The Final GoCoast 2020 Report, commissioned by the Executive Order of Governor Phil Bryant, included focus of â€œEco-Tourismâ€ to be a substantial initiative for recovery, restoration, tourism, and economic development. In response to the worthwhile efforts of the GoCoast 2020 Final Report, a Nature Tourism Task Force was created and adopted the â€œFramework for Nature Tourismâ€ on November 1, 2013. In its conclusion, the Task Force recommended the Mississippi Gulf Coast National Heritage Area (MGCNHA) to lead a nature-based tourism initiative. In 2015, with funding from the National Parks Service, the MGCNHA reinvigorated this Nature-based Tourism Task Force of nineteen (19) Gulf Coast leaders, with assistance from the contracted team of Allen Engineering and Science, Gulf Regional Planning Commission, and the Heritage Trails Partnership. This year-long consultation culminated in the recommendations depicted in the 2016 NBT Plan for Coastal Mississippi (NBT Plan). Accepting the charge to implement a nature-based tourism plan, this Mississippi Gulf Coast National Heritage Area - Nature Tourism Proposal for the Mississippi Gulf Coast Region outlines the framework to manage, operate, plan, market, and implement the recommendations with a budget of $10 million over the next five years. This proposal outlines management and administration, operations, planning, marketing, and implementation. Management and Administration: The MGCNHA will provide general management, oversight, and coordination of day to day operations for the nature-based tourism program. It will provide leadership to local officials and partners to implement the NBT Plan. Six (6) Area Managers will be chosen by each of the six coast counties to serve as liaisons to ensure that initiatives and priorities for each of the counties are being carried out with consistency, and that established goals are being met. Operations: The MGCNHA will implement the recommendations outlined in the NBT Plan, as they are aligned with the mission of the MGCNHA to conserve, enhance, and promote understanding of the heritage resources in the six counties of the MS Gulf Coast. Office and travel related expenses are included in the proposal. Planning: Years of collaboration between a diverse group of stakeholders, including tourism professionals, small business owners, natural resource experts, Chambers of Commerce, and NGOâ€™s in Mississippi culminated in the 2016 Nature-Based Tourism Plan for Coastal Mississippi developed for the six coastal counties. A successful program will benefit the ecological and economic health of South Mississippi, as well as provide a framework for development in the Mississippi Hills and Mississippi Delta National Heritage Areas.	George,Harrison, Pearl River,Jackson,Stone,Hancock	Yes	No	Yes	Yes	Yes	Yes	Yes	10	Yes		$ 10,000,000.00	$ -	
	Research and Education	5526	12/10/2016	Magnolia Bayou Acquisition and preservation/research center	Magnolia bayou is an approximately 87 acre bayou and stream that feeds into the Bay Saint Louis bay. It sits just behind the Froogels and to the east of Dunbar street off of Highway 90. It is relatively undisturbed, with homes surrounding the boundaries of the bayou. Hancock County does not have much in the way of environmental education centers, and this would be the perfect location for it. There is a cleared tract of land that sits just off the service road that could serve as the parking lot and educational building location. The educational center will offer classes on the natural environment in Hancock county, tours of the bayou, educational outreach to local schools and groups, etc. This will help bring eco-tourism to Hancock County, start a grassroots educational program with the local youth to teach them how to be environmentally conscious from a young age, and to preserve a very important piece of Hancock County for years to come. This project is flexible, but the important part is protecting this land from any future developments and to utilize it to educate our youth. If there are any questions about this proposal please don"t hesitate to contact me! Thank you so much for indulging me in this proposal.	Hancock	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ -	$ -	Land Acquisition
	Research and Education	5529	2/8/2017	BSL Harbor Pier 5	The City of Bay St. Louis (BSL) proposes to construct Pier 5 inside the BSL Harbor located at 100 Jody Compretta Drive, near Downtown BSL. The project consists of permitting and coordination with regulatory agencies, design, bidding and construction of a new 10' wide timber pier with concrete piling associated water and electrical utilities and lighting. The BSL Harbor has proven to be an economic driver for Hancock County and BSL since it's opening in 2013 and boasts one of the highest occupancy rates of all harbors on the MS Coast. The proposed Pier 5 project will add approximately 18 65' wet slips and approximately 25 35'-40' wet slips. These slip sizes represent the size range in most demand, all current slips in this size range are leased to long term slip holders.	Hancock	Yes	Yes	No	Yes	No	No	Yes	10	Yes		$ 1,500,000.00	$ -	
	Research and Education	5532	2/16/2017	Bay St. Louis Public Safety Complex	Public safety complex is proposed to include new city court facilities, police department facilities and shelter. The current police department is located in an existing structure near City Hall which is in need of significant repairs and the current facility can not support the growing and more technologically advanced police department equipment. The new location will be more centrally located to and adjacent to the existing fire department which was planned to serve as Emergency Operations Center for the City. The new facility will allow a severe decrease in prisoner transport since the city court will be co-located with in the police department facility and will provide a centrally located public safety complex and shelter for the Citizens of Bay St. Louis.	Hancock	Yes	No	No	Yes	No	No	Yes	15	Yes		$ 5,500,000.00	$ -	
	Research and Education	5535	3/2/2017	Land Between the Creeks - land acquisition	The Land Between the Creeks (LBTC) is a multi-property land acquisition opportunity in partnership with The Trust for Public Lands to permanently protect a critically important 2,320 acre site along the Pascagoula River corridor near the confluence of Red Creek and Black Creek in Jackson County, Mississippi. The Pascagoula is the largest unmodified river in the lower 48 states and is a state-designated Scenic Stewardship Stream and designated national blueway. Since 1974, government, landowners and NGO partners have collaborated to protect an 85-mile forested corridor of 72,000 acres of conservation lands along the river. If funded, this project will add 2,320 acres of well-managed working forests bordering state-designated Scenic Stewardship Streams Red and Black Creeks (major tributaries of the Pascagoula). The LBTC properties feature gently sloping, fire-managed pine uplands (including longleaf), pitcher plant flats, a 115 acre perennially flooded Cypress/Tupelo lake which boasts a multi-species rookery, and extensive bottomland hardwoods along Red and Black Creeks. The LBTC properties are one of the largest blocks of fire-maintained uplands along the protected Pascagoula River corridor. These diverse habitats benefit a number of important game and non-game species of concern. Once acquired, the LBTC properties would be owned by the State of Mississippi and managed as part of the Pascagoula River Wildlife Management Area. LBTC properties share approximately 7 miles of boundary on two sides with the Pascagoula River WMA. Acquisition of LBTC properties will provide needed recreational access to difficult to access segments of Red Creek and Black Creek as well as the state Pascagoula Wildlife Management Area's Big Swamp area.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition

	Research and Education	5536	3/6/2017	Gulf of Mexico Citizen Scientist Initiative: Development of a Mobile App for Marine Assessment (MAMA)	Introduction Advances in mobile phone technology have made it possible for citizens to contribute valuable data for ecological monitoring and scientific investigation. Citizen Scientist initiatives harness the massive numbers of people who are sportsmen and women, amateur naturalists and even the casual observer of nature, to submit observations and data that accumulate in a paralleled database. These initiatives have broadened opportunities for public participation in science and have served to â€œdemystifyâ€ the scientific process for the average citizen. Thanks to the internet and smart phones, data can be acquired, uploaded, evaluated, and accessed with amazing rapidity. Worldwide access to these data has served to encourage public participation in biological monitoring and has provided unprecedented opportunities for collaboration among scientists. There is a long history of citizen scientist involvement in biological research. Arguably, the earliest example of this involvement is the Audubon Society Christmas Bird Count that provided information to establish bird migratory patterns in the U.S. Other more recent citizen scientist initiatives include the Great Backyard Bird Count, NestWatch, the ZomBee Project, Wildlife Health Event Reporter and MERCCURI (a bacterial diversity project). Citizen scientist volunteers are being successfully employed around the world to generate databases that would be logistically impossible and prohibitively expensive for most research project budgets. In the Gulf of Mexico Citizen Scientist Initiative (GMCSI) proposal we will recruit and train citizen scientists in the use of a mobile phone app for marine assessment (MAMA) that will be developed. MAMA will allow Gulf Coast citizens and visitors to a.) upload photos, measurements, GPS location and other data regarding specimens they have captured, observed, and identified b.) submit photos of endangered/unusual specimens of fish and other marine creatures for identification, c.) track the abundance and health of fish species of interest seasonally and regionally, d.) document invasive species in Gulf waters, and e.) monitor changes in the health of coastal ecosystems and shoreline erosional changes. The curated long-term data set would be available to researchers and resource managers for scientific management. A database of this type can be an invaluable resource for assessing changes in the health of Gulf of Mexico ecosystems. Benefits of the Gulf of Mexico Citizen Scientist Initiative 1) Long-term data acquisition: A particularly valuable aspect of citizen scientist initiatives is the potential for long-term data acquisition. Data sets longer than a few years are rare in ecology and are sorely needed, particularly in marine systems. Once the mobile phone app is developed and distributed, we envision an â€œarmadaâ€ of citizen scientists collecting data for multiple years. 2) Coastal resident (and beyond) involvement: The GMCSI will recruit coastal residents as well as any other interested parties, that may act as â€œsentinelsâ€ to document and monitor changes in coastal populations of marine organisms. We firmly believe there is an untapped wealth of volunteers in Mississippi that would be glad to assist in this regard and, in particular, many individuals retired from academia and professional careers that would love to be involved. However, all interested parties, young and old alike, would be encouraged to participate.	Hancock,Pearl River	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 1,711,190.00	$ -	Monitoring
	Research and Education	5540	6/1/2017	Tourism Marketing Strategies	This projectâ€™s scope would be to develop a tourism marketing strategy that would include the creation of an interactive website and attractive brochure/other marketing materials for placement at key locations to highlight the Cityâ€™s unique tourist attractions, lodging opportunities, retail areas, restaurants and other amenities. This informational packet would include a map showing directions to each location. It is anticipated that kiosks could be strategically placed that would aid tourists in finding their desired destinations and to inform of other points of interest. The City does not have a chamber of commerce to help with such items.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes	25	Yes		$ 100,000.00	$ -	
	Research and Education	5541	6/1/2017	Shepard State Park Recreational and Ecological Enhancement	The City of Gautier has assumed the daily operations and management of this 395-acre park, which is located south of U.S. 90 along Graveline Road. Currently, the park consists of eight miles of trails, with a mix of developed and primitive camp sites throughout. In addition, the park has disc golf and a premier outdoor archery range with 28 lanes. The City has increased the utilization of the park by the addition of these amenities and has hosted national archery tournaments, bringing tourists from all over the United States to participate, as well as state high school archery teams and Senior Olympics tournaments. SEC college archery has also expressed interest in using the facility for its conference championship. The facility is one of few within the state of Mississippi and is unique to the state due to its surroundings. The City is already home to the Mississippi Sandhill Crane National Wildlife Refuge and offers birding and wildlife eco-tours of its swamps and bayous, resulting in eco-tourism visitors from all 50 states and numerous other countries each year. The City seeks to add amenities and upgrades as set forth below to Shepard State Park to further enhance, capitalize on and increase the number of tourists for its eco-tourism attractions. The City plans to expand the recreational opportunities available at Shepard State Park to assist in developing this pristine park into one of the southâ€™s premier nature destinations. Expansion of the existing nature trails will be implemented to reach additional areas of the park. Shepard State Park is home to a variety of wildlife native to the coastal area, such as great white egrets, pelicans, eagles and osprey. Additionally, other woodland creatures reside in the area, including deer, wild rabbits, opossums, foxes, raccoons and more. In the surrounding bayous, visitors can see turtles, alligators, wild geese, and a wide variety of fish. Strategically placed resting areas and observation decks will be constructed for creating an environment for optimal opportunities to monitor the wildlife and bird watch, as the park is listed on the Mississippi Coastal Birding Trail. The existing road network throughout the park is in need of repairs. The City is proposing to complete such repairs, clear underbrush and remove invasive species of vegetation. Furthermore, new water and sewer lines will be placed to upgrade and expand sites within the park with such amenities to support additional restrooms, pavilions and playground areas. Power lines and park friendly lighting will be installed to delineate the appropriate pathways for visitors throughout. Due to the age of the park, many upgrades are needed, and this project would include walking trail upgrades, including new foot bridges in low-lying areas prone to flooding, trail clearing, a rehabilitated small boat launch and fishing pier, updated and repaired grills, fire pits and picnic tables at RV sites, an amenities building with laundry facilities and recreational game tables, educational plaques for the trails, fire pits, an outdoor classroom, a natural playground, traditional playground equipment, kayak launches, a lodge to accommodate guests and overnight studies in conjunction with the outdoor classroom, a new bathhouse and bathroom renovations. The City envisions that the lodge will be utilized by educational institutions, including the Mississippi Gulf Coast Community Collegeâ€™s Jackson County campus located within the City, and other educational institutions utilizing the premier archery range as part of their sports curriculum. Mississippi Wildlife Rescue has also expressed interest in utilizing Shepard State Park as a research and rehabilitation site. Additionally, the City has recently acquired a historic two-story log cabin, The Wilson House, and is relocating the house to the entrance of Shepard State Park to serve as a welcome center, visitorâ€™s center and general store for park visitors/campers. That project is currently underway. The park also has another large home on adjacent land that is in need of repair. The City has plans to upgrade this house for community meetings and small events. The City plans to leverage Tidelands, Recreational Trail Program and Land Trust for the Mississippi Coastal Plain funds and other available funding opportunities to complete some of the amenities in its long-term plan stated above. This project would promote long-term economic growth and increase economic development through eco-tourism and recreational opportunities that are unique to the coastal area. The City already has an established eco-tourism base, and these additions would encourage these tourists from all over the United States and other countries to stay and play in the Coastal region of our state, particularly in Gautier, Mississippi. Gautier is unique to have an almost 400-acre park within its City limits.	Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes		$ 9,000,000.00	$ -	
	Research and Education	5542	6/1/2017	Gautier Town Center (The Commons Park)	The City of Gautierâ€™s Town Center is located in the Central Business district, and plans are currently being developed for revitalizing the property of the old Singing River Mall into a major retail development for the City, Jackson County and the outlying areas. The proposed development being considered would include an open air mall, box stores and national tenants to attract interstate commerce. Jackson County does not contain a mall; however, there was one within the City of Gautier prior to the BP oil spill. It has since been torn down and suffered greatly as a result of the oil spill. The Gautier Town Center Project is located in Gautierâ€™s central business district. The Town Center is anchored by municipal buildings, commercial strip centers, MGCCC, and the mall project. Due to Gautier being situated along Highway 90 and being a â€œyoungâ€ city, it has no downtown area. Furthermore, Gautier is home to a Waste Pro home office, and a transfer station is proposed along Beasley Road, which is a dead end road that currently provides the only ingress/egress for a landfill, Waste Pro, municipal buildings, residential neighborhoods and heavy commercial uses. Therefore, the Town Center Project includes a network of roadways to facilitate the new town center commercial development and provide a connector from Gautier-Vancleave Road to Beasley Road. The Gautier Town Center Project incorporates 0.5 miles of roadway and 1 mile of multi-use pathway to link together retail, residential and recreational areas. It will also provide the transportation infrastructure necessary to accommodate the industrial type development nearby. The City has approximately 33 acres of property immediately north of the Town Center. The City has leveraged funds from both Tidelands and the Coastal Impact Assistance Program to acquire the property necessary for the Commons Park and to provide initial transportation infrastructure, lighting, sidewalks and streetscape improvements for the planned project. The City is proposing to develop a large recreational area and public park in conjunction with the Commons Development. A great portion of the property consists of wetlands. Throughout these areas, nature trails will be constructed to permit public access throughout this pristine ecological area. Small pavilions and tree houses will be placed along these trails to provide resting areas and opportunities to view the wildlife. Educational plaques depicting the wildlife and various species of plant life will be strategically placed throughout the nature trails explaining the wildlife habitat and ecological area. The center portion of the park will consist of a Great Lawn and festival grounds that will be a focal point for large crowd gatherings. The City of Gautier has an annual Mullet and Music Festival, which is held in conjunction with Cruisinâ€™ the Coast. The City of Gautier anticipates becoming an official stop for Cruisinâ€™ the Coast in the near future and is already an event destination. The Mullet and Music festival and Cruisinâ€™ the Coast brings thousands of people from throughout the country to the coastal area, resulting in substantial revenue for the coast region and the state as a whole. These annual events are unique to the Mississippi Gulf Coast and Gautier. To the west end of the lawn, there will be a large open pavilion that will be designated for special events such as festivals, family reunions, and so on. An amphitheater is proposed for the east end of the lawn and would be utilized as an outdoor entertainment venue. Positioned along the south edge of the lawn, there will be a multiuse football/soccer field, restrooms, pickleball courts, and a musical playground area. The multiuse football/soccer field would also be utilized as a vendorâ€™s site and festival grounds to support special events. In addition, the property currently has a small lake, which will be expanded and enhanced. The Great Lawn and a portion of roadway and trails are strategically positioned as such to provide immediate access to the small lake. Enhancements for the lake would include adding benches and a musical water feature to create a serene recreational area for visitors.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 15,000,000.00	$ -	
	Research and Education	5548	4/12/2017	The SBCF New Wave Center for Innovation and Technology	Small Business Capital Fund of MS, Inc., (SBCF) is a 501c3 US Department of the Treasury Community Development Financial Institution (CDFI) that specializes in finance programs and technical assistance for MS businesses and has done so since 1994. As an administrator of several MDA small business assistance programs since the 1990â€™s, SBCF is uniquely qualified to address at least five of the eight key areas of focus of the GoCoast 2020 goals as set forth by Governor Phil Bryant in 2012. SBCF is most fortunate, as well, to have the full support and endorsement of Governor Bryant and his office with the submission of this request, and thereafter, if selected. The key areas that SBCF would address include: Workforce and Economic Development, Small Business Assistance, Research and Education and Infrastructure. If afforded this opportunity, SBCF would collectively address these areas by designing/building and operating a facility that would provide both incubator and accelerator services to coastal area start-up and existing businesses. Through an expansive technical assistance platform, SBCF would provide entrepreneurs and business owners with innovation tools and strategies, targeted access and approaches to research and resources, access to certain industry specific training and certification programs such as the ISO/IEC 27000 family of standards for cyber security to protect their IT environment as well as ISO 9000 training and certification to help organizations to most effectively and efficiently fulfill the needs of both their internal and external audiences while meeting statutory and regulatory requirements. SBCF would also work with large employers by facilitating personal development, guided self-help, programs for their employees such as, â€œYour fiscal self affects your physical self. Learn how, why and what to do about it.â€ Though designed to assist employees with tools and information to address and correct credit and financial issues, the employer ultimately benefits as it eliminates use of company time and distractions handling personal matters resulting in increased productivity, bottom line and overall company morale. As the majority of efforts would be centered on infrastructure, SBCF would enhance its offerings to prime and subcontractors, public and private agencies and organizations in construction and transportation-related industries as well as provide access to complementary or peripheral services such as bonding agents and professional service providers that cater to those industries. It is SBCFâ€™s desire to assist with rejuvenating the MS Gulf by providing a space that will make way for the next wave of business leaders, startups, entrepreneurs and forward-thinking companies to excel by linking the knowledge and experience of the past with the innovation and technology of the future. In short, our project is Gulf coast eco-gardening at its best!	Harrison,Jackson	Yes	No	Yes	No	Yes	No	Yes	60	Yes		$ 7,500,000.00	$ 250,000.00	

	Research and Education	5550	5/1/2017	Cherokee Urban Forestry Project Proposal	"Cherokee Estates is a neighborhood in Pascagoula, MS located immediately next to Bayou Cassotte and a lot of heavy industry. This includes a Chevron Refinery, First Chemical, MS Phosphates, Halter Marine, Etc. This creates a lot of air pollution and dust. The residents of Cherokee have complained to industry, EPA, MDEQ and the City of Pascagoula. One partial solution would be replanting a line of trees that were removed to widen a road. These tress were tall and dense enough to catch some of the noise, air pollution, and dust. The State of Mississippi, EPA, MDEQ, Jackson County and the City of Pascagoula would all like to see some improvement". Howard page, Steps Organization Need: Trees provide buffers from sound, air pollution, soil pollution, storm water run-off and trees have a large capacity to enhance property values and create quality places to live. This area is in dire need of a living buffer that offers eco-system services. This project will plant a tree buffer and be used as an educational tool to demonstrate how to use trees for the maximum benefits. This is an excellent location to demonstrate upland land management and how it can benefit downstream for healthier gulf habitats. This area is receiving a lot of public attention and provides an opportunity to demonstrate tree benefits and using trees to address upland watershed issues and how trees directly impact gulf health. We will combine planting trees with providing education in the community about the connections. This project will focus on how land owners, home and business owners can get involved in their community health by planting the right tree in the right place In this area we will inventory plantable spaces and plant the correct tree species for climate, soils and buffer benefits. Project: This project will be a challenge in that the development damage is significant enough to warrant a variety of practices with trees being a most beneficial aspect of redevelopment for this area. We will use areal maps, GIS for inventory of plantable spaces, develop a best species list for small, median and large trees and provide planting and tree maintenance workshops to residents plus invite the general public to attend the workshops. We will plant to majority of plantable spaces. Once the tree buffer has been established it will provide a model for generations to come and for new development to learn from as well. The tree buffer will consist of any public lands and private lands surrounding the issue. Private landowners will be offered trees for them to plant if adjacent to the project area. Deliverable: Deliverables will include a linear green space of trees serving as a buffer from pollution and storm water run-off. An education brochure will be developed to highlight the species and placement plus the eco services the trees provide. We will use the i-Tree program to calculate a monetary value on these services. We will include outreach with educational documents highlighting plan features, workshops, media outlets, and through the partners in the area, local government, industry and state agencies. Activities: This project qualifies as both education and outreach based because it will demonstrate ways to use trees to mitigate negative impacts of development. In the process of design and planting this site a series of education events will be included. The focus groups will include: Cherokee Citizens Group, industry, contractors, local leadership, other NGO's. a. Develop a local team made up of local government, state and federal agencies, arborist, citizens and others. b. Inventory plantable spaces (public and private) and develop tree species lists. c. Conduct educational workshops and planning forums d. Implement tree planting in stages, implement BMP's and other strategies.	Jackson	Yes	No	No	No	No	Yes	No		No		$ 100,000.00	$ -	
	Research and Education	5551	5/3/2017	Pollinator Health for Food, Wildlife and People- Public and Private Lands Environmental Education	Pollinator Health in Urban and Rural Communities Pollinator health is about our social and economic impacts and how all citizens can play a role in its success. Many times research on environmental projects do not have the opportunity to be applied on the ground in a variety of venues with nontraditional audiences. So, if research does impact citizens of all walks, it can result in a greater success rate for the mission and when data and knowledge is disseminated in a unique way it supports fulfilling its true potential or establish greater span of those impacted by the benefits. This project puts research, education, BMPs, technology and education in the hands of local citizens and community leaders that can make a difference on their properties, their community public lands and specialty crop farmers. Most local citizens do not have a clue how pollinator health impacts the quality and production of their food. The MUFC network provides a very hands-on opportunity to determine if citizens in these audiences can gain a better understanding of the role they play in pollinator health, the practices they can implement and why it's important. MUFC has many years of using research data and applying it to our cities and towns and the citizens living in and near these communities. The ultimate challenge of any research is applying that research on the ground, providing sound technology transfer, demonstrating best management practices and supporting the mission through creative partnership and collaborations. We will work through our municipal partners to conduct the workshops and implement the pollinator sites. Currently, MUFC has 97 communities in our Bloom Town Mississippi program with every community on the coast included. All of these are willing to host a pollinator health sites. Other local partners will include local community leaders, civic groups and private producers and land owners to install 12 demonstration sites and provide a series of outreach and education venues. Through this project we will partner with the groups we currently in our network and even new collaborators to include: workshops, hands on implementation of planting, social networking, local press, newsletters, web site, and large data base contacts. Contacts in the project include industry partners, mayors, city leaders, civic groups, chambers, parks and recreation professional, arborist, forester, landscape architects and citizens. Proposed metrics include multiple sources of information as outline in detail in the pre-proposal. Any data, surveys, charts, photo journal or other information generated as a result of this project will be public information and available for FAR or other research to use as needed.	George,Harrison, Washington,Perry,Forrest,Pearl River,Jackson,Mobile,St Tammany,Stone, Hancock	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ 110,000.00	$ 75,000.00	
	Research and Education	5553	5/15/2017	Buccaneer State Park Feasibility Study	The Mississippi Gulf Coast region has an opportunity for an economic development project combining nature and wildlife education with family entertainment. The proposed project location is Buccaneer State Park in Hancock County, and would create a public-private partnership between local and state governments and the Audubon Nature Institute. Buccaneer State Park, which is located on the Mississippi Gulf Coast in Waveland, was devastated by Hurricane Katrina in 2005, with all of the structures, waterpark and support facilities completely destroyed. Today, the Park has been beautifully restored. It is in a natural setting of large moss-draped oaks, marshlands and the Gulf of Mexico. The Park offers Buccaneer Bay, a 4.5 acre waterpark, Pirate's Alley Nature Trail, a playground, Jackson's Ridge Disc Golf, an activity building, a campstore, and Castaway Cove pool. There are 206 premium campsites with full amenities, including sewer, and an additional 70 campsites that are set on a grassy field overlooking the Gulf of Mexico. The Park is centrally located to major population centers in Mississippi, Alabama and Louisiana and state and federal highway systems. The Audubon Nature Institute has a successful track record and currently owns and/or operates several educational and family facilities. Partnering with the Institute provides an opportunity to develop Buccaneer State Park into a major ecotourism destination. A park of this magnitude will generate jobs and income for the Mississippi Gulf Coast communities. The park can enhance the existing entertainment choices such as the beaches, casinos, fishing/hunting, and shopping currently offered. This partnership will work to create a park experience unique to the State of Mississippi, and in particular the Mississippi Gulf Coast. To move forward with exploring this opportunity, the Audubon Nature Institute must first perform a feasibility study. This study, which would have stakeholder and public participation, would include an analysis of the park needs (such as recreational and educational attractions), an economic feasibility analysis, an impact assessment, and an implementation program.	Hancock	Yes	No	No	Yes	No	No	No		Yes		$ 400,000.00	$ -	
	Research and Education	5560	5/16/2017	Pascagoula River Scenic Trail	Water trails are marked routes on navigable waterways such as rivers, typically for people using small non-motorized boats, such as kayaks and canoes. Originally created by environmentalists and conversationalists to encourage environmental awareness, they have evolved to be recreational routes on waterways with a network of access points. The Pascagoula River is the largest by volume unimpeded river in the contiguous 48 states. This project will develop ecotourism opportunities by establishing and developing a scenic water trail along the Pascagoula River. This scenic water trail will bring sustainable rural development to communities along the river in Jackson County. As the State's first water trail, it will serve to strengthen and extend recreational opportunities for residents and visitors. Trailheads will be constructed in four strategic locations along the river. Each trailhead will provide amenities such as public boat and kayak launch, pavilions, parking for visitors, and a kiosk with a map of the area. Although new to the State of MS, water trails have been implemented in other states and studies have been conducted to measure their economic impacts. While dissimilar in their measurements and time frames for data collection, each report shows that water trails can increase paddle sports tourism and bring new money into local economies. The studies also explored social benefits to a community and found that water trail communities experienced lower poverty rates and higher education and health levels than communities that do not provide recreational activities. Increased tourism around water trails will bring additional tourism dollars to the community. The Pascagoula Water Trail will create tourism travel to Mississippi by being the first Water Trail in the state, strengthen Jackson County's tourism economy through travel on nearby waterways, grow recreational opportunities with promotion of the Pascagoula River and highlight the historic significance of the waterway. The proposed locations for the trailheads are as follows: -Northern Trailhead – Cedar Creek area -Roy Cumbest Trailhead – Wade Vancleave Road -Hickory Hills Trailhead – Near Hickory Hills Golf Course -South Trailhead – Located near Gautier at U.S. Highway 90	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	70	Yes		$ 3,000,000.00	$ -	
	Research and Education	5566	6/21/2017	Presence, Potential Sources, Behavior and Fate of Endocrine Disrupting Chemicals in Northern Gulf of Mexico Estuarine Systems	NOAA Project ID# 12881: This project will conduct the first detailed sediment, surface water, suspended organic matter, and sediment pore water assessment of northern Gulf of Mexico estuarine systems to identify the presence, potential sources, and physicochemical mechanisms controlling the behavior and fate of complex mixtures of known or suspected endocrine disrupting chemicals (EDCs) in these systems. EDCs are natural or synthetic compounds which, even at trace exposure levels, can alter early development in vertebrates and invertebrates and cause serious effects later in life or even in successive generations. Known or suspected EDCs include many compounds used in or produced during oil and gas exploration/production; some of the more recalcitrant compounds associated with raw crude oil are known/suspected EDCs. EDCs can easily pass into ecological systems and are often persistent; moreover, the consequences of exposure are markedly different from how we usually think of exposure to environmental contaminants. At the levels found in natural systems, EDCs do not destroy cells or attack DNA. Rather, they target a developing organism's chemical messengers (hormones) and the messaging network (endocrine system). Organisms living in estuaries are particularly vulnerable to the effects of EDCs, mainly because estuaries are natural sinks for contaminants transitioning from terrestrial to marine ecosystems. Estuaries are among the most productive biomes on earth; nearly 50% of the world's population lives or works in close proximity to estuaries. Consequently, estuaries are under increasing threat from both natural and anthropogenic stressors (including EDCs). Little is known about the types, behavior, and ultimate fate of the vast number of potential EDCs entering estuaries, although it is known that some EDCs are present in these systems and that some estuarine organisms show signs of EDC exposure. Very few field-based studies have considered EDC behavior and fate in estuaries. Of these, most have considered a limited number of sampling locations, a single sampling event, or both. Moreover, most did not consider mixtures of EDCs likely to be encountered in estuaries, nor were their methods of chemical analysis capable of detecting or quantifying EDCs at trace levels. Also, none considered sediment pore water as a partitioning phase, and none attempted to quantitatively link EDC partitioning behavior to spatiotemporal distributions of multiple EDCs within real estuarine systems. The proposed project will significantly advance our abilities to detect and quantitate mixtures of EDCs at trace concentrations in complex estuarine samples and will provide the first quantitative mechanistic evidence linking the behavior of EDC mixtures (transport and partitioning) to their fate (spatiotemporal accumulation, sequestration, and resuspension) as a function of dynamic estuary system conditions (hydrodynamics, water quality parameters, physicochemical conditions of partitioning phases). The results of this project will provide the first detailed, data-driven assessment of the scope of EDC contamination in northern Gulf of Mexico estuarine systems, provide a basis for examining ecological and human risks posed by EDCs in these ecosystems, and inform potential restoration actions to address these risks. Date Entered: February 3, 2017		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	$ 150,000.00	
	Research and Education	5578	6/22/2017	Anthropogenic and Biological soundscape assessment of the Mississippi Sound using passive acoustics	NOAA Project ID#13023: Passive acoustics is a very versatile tool in studying both anthropogenic (boat traffic, dredging, etc.) and biological (fish, marine mammal, invertebrate) sound sources. Long term recorders can be deployed with oceanographic sensors for up to several months at various locations within the MS Sound to assess the presence, temporal and spatial distribution, and interactions of both types of sound sources while also monitoring basic oceanographic properties such as temperature, salinity, and light. Post-recording detection algorithm analyses can identify soniferous fish and invertebrate species, as well as marine mammals, inhabiting the coastal waters of Mississippi in order to provide more information on temporal or spatial habitat range variability. Some soniferous fishes in Mississippi waters are also an important commercial stock. Assessing their distribution and potential changes in temporal or spatial habitat usage can directly affect management and restoration decisions. Marine mammals specifically are a sentinel species, reflecting the overall health of the coastal ecosystem, and were greatly affected by the oil spill. Being able to manage impacts to their survival or habitat are vital to the health of the Gulf of Mexico. Documenting overlap of oceanographic water properties (i.e., river outflow characteristics) and marine mammal distribution offers another piece of missing information about the impact of freshwater outflow on dolphin distribution and habitat range. Date Entered: May 3, 2017	Harrison, Hancock, Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 60,000.00	$ -	

	Research and Education	5579	6/22/2017	Model open-ocean marine mammal habitats to guide their protection and conservation	NOAA Project ID#13010: Detailed scientific data are lacking for many species of offshore marine mammals in the Gulf of Mexico, so restoration activities will require an incremental approach including initial data collection and monitoring, that will vary by species and stock. To identify priority threats there is an additional need for population monitoring, and spatial habitat definition. Population assessment, monitoring and habitat characterization is needed for offshore marine mammal populations due to the substantial gaps in our understanding of these difficult to study species. The detailed offshore distribution of most offshore marine mammal species is poorly understood. A better understanding of offshore marine mammal prey dynamics is also needed. To address these limitations, all existing data on offshore marine mammals will be used to construct models of their distribution and habitat. These models will be refined and validated by targeted data collection. Additional data collection may involve visual, acoustic, tagging and other methods. Areas of overlap between critical marine mammal habitat and potential injury from anthropogenic activities will be selected as the focus for zones of study. Population monitoring and habitat modeling are further required to assess the effectiveness of restoration strategies. Date Entered: May 2, 2017 Date Edited: May 3, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ 450,000.00	
	Research and Education	5582	6/22/2017	Reduce vessel collisions with marine mammals	NOAA Project ID#13007: This project will restore open-ocean marine mammals by reducing their collisions with vessels in the Gulf of Mexico. A program will be developed to understand the nature of marine mammal and vessel collisions and strategies to avoid them. Use of passive acoustic data, predictive modeling, and animal tagging data will inform better understanding of the causes of ship strikes and their threats to each population of marine mammals. A collaborative partnership with NOAA and the shipping industry will be developed to assess changes in vessel routing that could reduce the risk of marine mammal and vessel collisions and/or voluntary speed restrictions that would help reduce the probability of vessel collisions. Recreational boater education and awareness will be another issue addressed by this project. Brydeâ€™s whales (Balaenoptera edeni) are the only resident baleen whale species in the Gulf of Mexico (GoMx), where they are extremely rare, and have a distribution restricted to the eastern Gulf of Mexico. Vessel collisions may be a major factor in their restricted distribution and small population size. Tagging data suggest that these whales have shallow nocturnal diving patterns with 88% of their nighttime spent near the surface within the draught depths of most large commercial vessels. Better understanding of how to protect Bryde's whales from vessel collisions will be one goal of this project. Date Entered: May 2, 2017 Date Edited: May 3, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ 500,000.00	
	Research and Education	5583	6/22/2017	Reduce impacts of anthropogenic noise on marine mammals	NOAA Project ID#13022: The goal of this project is to identify the sources of ocean noise and map their relative influence as stressors of offshore marine mammals, and to propose means for noise mitigation. Ocean noise in the GOM has reached the highest levels measured at any open-ocean location, owing to anthropogenic noise from commercial activities related to oil exploration and production and commercial shipping. Calibrated passive acoustic monitoring data will be used to characterize the spectral, temporal, and spatial distribution of anthropogenic noise throughout the GOM and determine areas of overlap between high noise levels and marine mammal habitat. Long-term passive acoustic data have been collected throughout shelf, slope, and deep-ocean waters. These data will be used to make geospatial models of noise distribution and their overlap with marine mammal habitat. In addition, the source levels of individual noise sources (seismic airguns, commercial ships, oil platforms) will be measured to provide model input. Collaborative partnerships (NMFS, NOAA Sanctuaries, NGOs) will be developed to identify, test, and implement strategies to reduce noise impacts from sources of commercial shipping, and seismic exploration and extraction noise, with priority for noise reduction in areas of overlap between high noise levels and high animals densities. Date Entered: May 3, 2017 Date Edited: May 4, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -	
	Research and Education	5584	6/22/2017	Reduce Marine Mammal Bycatch in Commercial Fishing Gear	NOAA Project ID#13033: Bycatch in fishery gear is a leading source of mortality for marine mammals; however annual mortality of marine mammals in the Gulf of Mexico from fisheries bycatch is not well understood. Gulf of Mexico fisheries with known or potential marine mammal bycatch include: pelagic longline, shrimp trawl, gillnet and purse seine. Bycatch in fishery gear will be addressed as a collaborative project with NOAA and the fishing industry. Offshore Gulf of Mexico stocks that are known to be impacted include spotted dolphins, as well as shelf and three stocks of coastal bottlenose dolphins. Expanded and enhanced fisheries observer coverage will be supported and better understanding of the circumstances that lead to cetacean bycatch will be obtained. A strategy will be developed to address marine mammal bycatch in commercial fisheries, including potential modifications to fishing hardware and methods. Date Entered: May 4, 2017 Date Edited: May 4, 2017		Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	5585	6/22/2017	Passive Acoustic Monitoring for Open-Ocean Marine Mammal Restoration in the Gulf of Mexico	NOAA Project ID#13034: An array of five passive acoustic monitoring recorders have been deployed continuously since 2010 in the Gulf of Mexico, in response to the Deepwater Horizon oil spill. These instruments allow monitoring of marine mammal populations for a variety of species (e.g. sperm whales, beaked whales, delphinids, Brydeâ€™s whales). Our proposed project would extend the temporal sampling and expand the spatial coverage of passive acoustic monitoring to include the entire GOM, to allow monitoring for marine mammal restoration efforts including habitat modeling and the study of impact assessment from anthropogenic noise and vessel collisions. Current long-term Passive Acoustic Monitoring (PAM) efforts in the Gulf of Mexico consist of five sites that were designed for damage assessment following the Deepwater Horizon oil spill. These sites have been operating continuously since summer 2010, and are collecting data using High-frequency Acoustic Recording Packages (HARPs). The High-frequency Acoustic Recording Package is uniquely capable of collecting continuous broadband acoustic data suitable for marine mammal density estimation for the full range of species. No other autonomous acoustic monitoring hardware is available that can match the HARPâ€™s capabilities for bandwidth and deployment duration. Likewise, the Scripps Institution of Oceanography has unique capabilities for collecting, processing and analyzing large acoustic data sets for marine mammal calls. Our project partners, University of St Andrews Centre for Research into Ecological and Environmental Modeling (CREEM), have world-leading capabilities for providing density estimates from long-term passive acoustic monitoring datasets. Together, we have been working with NMFS SEFSC to use these density estimates as part of a habitat model, integrating both visual and acoustic data into the final model. Our vision for this project is to create a passive acoustic monitoring network that includes sensor coverage for the entire US Gulf of Mexico. The rationale for this plan is to allow robust estimates of marine mammal populations, sufficient spatial coverage for habitat modeling, and detailed models of soundscape including both broadband and directional information. Density estimation using passive acoustic data requires supplementary information on animal sound production rates (cue rate), source levels and behavior. We have been working to develop density estimates for deep diving cetaceans, delphinids, and Brydeâ€™s whales in the Gulf of Mexico. As a component of the overall project, we propose to collect data on animal diving and vocal behavior using suction-cup attached acoustic recording tags, in addition to constructing acoustic tracking arrays at selected monitoring sites. These data will provide the supplementary information (detection distance, call production rates) needed to expand the range of species that are amenable to density estimation. Date Entered: May 5,2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -	
	Research and Education	5588	6/23/2017	Migratory Species Studies	NOAA Project ID#12967: Expand Gulf of Mexico Migratory Species Pathways Mapping and Conservation Project with emphasis on migratory connectivity modeling, threats assessment, and the identification of habitat restoration needs including pelagic habitat. a. Objectives: Understand the most significant migratory pathways of fish, Sea Turtles, Marine Mammals, and birds in the Gulf of Mexico large marine ecosystem, and the habitats that their populations need to continue being viable; identify the most important threats to those pathways and habitats. b. Species group/habitat: Fish and Water Column Invertebrates, Sea Turtles, Marine Mammals. c. Description: Migratory species rely on multiple habitats to complete their life cycles. This project should: i. Assess the threats to species while migrating (along their pathways) in the Gulf of Mexico ii. Develop an optimized habitat portfolio using GIS and migratory connectivity models that identify the essential habitats to maintain migratory species populations throughout their life cycle and to guide habitat restoration and protection. iii. Support technological advancements in the development of biological tracking and oceanographic monitoring networks, such as acoustic monitoring networks, gliders including the development of migratory movement tracking networks and infrastructure across the Gulf. To do that it should fund: current or new establishment of scientific and management networks of practitioners assessing the movements of marine organisms (e.g., iTAG network of acoustic telemetry) and synthesis of a collaborative strategy for a Gulf of Mexico Animal Tracking Network. The project continues work previously completed and published by The Nature Conservancy to map the migration routes of 26 bird, fish, marine mammal and turtle species in the Gulf of Mexico (Brenner et al. 2016). We believe that this research revealed the great importance of species migration to the Gulf ecosystem as well as the importance of continuing to com pile and analyze migratory pathways as an important decision-making tool for Gulf restoration. This project would accomplish the next phase of this work with particular emphasis on threat assessment and identification of the most critical migratory pathways for protection for their habitats. (Brenner, J., C. Voight, and D. Mehlman, 2016 Migratory Species in the Gulf of Mexico Large Marine Ecosytem: Pathways, Threats, and Conservation. The Nature Conservancy, Arlington, VA. 93 pp.) Date Entered:April 26, 2017 Date Edited:May 7, 2017		Yes	No	No	No	No	Yes	No		No		$ 1,200,000.00	$ 250,000.00	
	Research and Education	5591	6/23/2017	Centralized Database for Marine Turtle Flipper and PIT Tags	NOAA Project ID#13055: Objectives: - Maintain the Cooperative Marine Turtle Tagging Program (CMTTP) - Initiate and maintain an online comprehensive inventory of PIT tags Many programs supporting the management and conservation of sea turtle populations in the Gulf of Mexico and northwest Atlantic waters rely on tagging sea turtles with flipper tags and/or PIT (passive integrated transponder) tags. These tagging efforts are worthless if recovered tags cannot be matched with data from the original tagger. Almost all flipper tags in the Gulf of Mexico and northwest Atlantic waters are issued through the Cooperative Marine Turtle Tagging Program (CMTTP), which was established by the National Marine Fisheries Service (NMFS) to provide a centralized tag database for management purposes (NMFS reserves the right to access the CMTTP database) and to prevent loss of data and duplication of identification codes. In April 1999, the management of the CMTTP was transferred from the Miami Laboratory of the Southeast Fisheries Science Center to the Archie Carr Center for Sea Turtle Research (ACCSTR) at the University of Florida. In recent years, 127 organizations have received flipper tags from the CMTTP. About 10,000 tags are distributed each year. For example, 13,750 flipper tags and 82 tag applicators were distributed in 2016. All flipper tags have a University of Florida return address. The centralized flipper tag database now has 139,680 entries. The use of PIT tags is increasing because of their extremely low loss rate (approaching zero) compared with loss of flipper tags. However, coordinating data from PIT tags is a greater challenge than flipper tags because PIT tags, unlike flipper tags, do not carry a return address and are not distributed in numerical sequence. An online comprehensive inventory of PIT tags is needed so that if a turtle with a PIT tag is found, the group that tagged the turtle can be identified and data exchanged. When PIT tag data are submitted to the CMTTP, they are entered into a PIT tag database. That database now has 55,640 entries, but this is a fraction of the PIT tags inserted into turtles. There is still a need for a PIT tag database that lists all PIT tag codes with the contact information for the tag originators. The CMTTP is the contact for unscrambling encrypted PIT tags within NMFS. We are submitting this idea proposal to maintain the Cooperative Marine Turtle Tagging program and to initiate and maintain an online comprehensive inventory of PIT tags. We have submitted a 3 year estimated budget. Date Entered: May 10, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 624,030.00	$ 51,000.00	
	Research and Education	5592	6/23/2017	Restoration in Place Strategy for the Deep-sea Soft-Bottom Benthos: Long-term Monitoring to Support Restoration Efforts	NOAA Project ID#13059: The Deepwater Horizon (DWH) incident in the northern Gulf of Mexico (GOM) occurred on April 20, 2010 at a water depth of 1525 meters, in Mississippi Canyon Block 252, releasing an estimated 3.19 million barrels of oil over the following 87 days. As part of the Natural Resource Damage Assessment (NRDA) process, a study comprising three field surveys (2010, 2011, and 2014) was conducted to identify effects of the spill on the deep-sea, soft-bottom benthos and sediment quality. Results revealed a zone of severe to moderate impacts on biodiversity linked to the DWH wellhead that persisted through 2014. Thus, an obvious restoration goal for the deep sea is to return biodiversity and other key benthic attributes to normal reference-range conditions. It is hypothesized that burial of the damaged habitat by natural deposition processes will cap the damaged sediment and restore the benthos to background conditions. The obvious question is: how much sediment is needed to cap the DWH contamination, and long will this take? Based on the NRDA studies, 95% of the benthos is within the top 10 cm of sediment. A recent examination of deep-sea sediments in the area of the 1979 Ixtoc spill, found 4 cm of fresh sediment on top of the damaged sediment. Using this rate, it is hypothesized that it will take another 65 years to have a total of 10 cm at the Ixtoc site, which implies it takes about 100 years for deep-sea sediments to recover naturally. Thus, the restoration strategy for deep-sea soft-bottom benthos must be a long-term study to monitor the recovery rate and verify that this assumption is correct. Now is the time to begin planning specific projects for the open ocean and deep-sea benthos, because the Damage Assessment and Program Restoration (DARP) report is complete and the Open Ocean Restoration activities are being developed. However, two challenges exist: (1) rates of change in the deep sea are very slow, and (2) we know very little about temporal dynamics in the deep sea Gulf of Mexico. Until we understand basic temporal dynamics, it will be difficult, if not impossible, to ascertain if change is a result of recovery, seasonal dynamics, or year-to-year variability. Thus, the proposed sampling strategy includes both a long-term monitoring strategy to measure recovery and a short-tem experiment to identify temporal dynamics. A third component of the strategy is to analyze archived samples of opportunity collected in 2015, 2016, and 2017 during Gulf of Mexico Research Initiative (GOMRI) funded cruises, where analyses of the benthic samples were not funded. The long-term monitoring study would include sampling 34 NRDA stations bi-annually (every 2 years) until recovery occurs (or for the length of the RESTORE program, which-ever occurs first). The 34 stations consist of 20 moderately and severely impacted sites, and 14 non-impacted sites. Spatial coverage across the treatment categories is necessary as a basis for comparing impacted versus non-impacted areas. The temporal dynamics experiment would entail quarterly sampling over two years at six stations. Quarterly sampling is necessary to identify if seasonality exists, and a two-year cycle is required to confirm that the patterns are repeatable. Three stations in the heavily impacted zone and three stations from non-impacted zone would be sampled in order to determine recovery based on whether spatial differences between treatments are distinguishable from natural temporal dynamics. The analysis of archived GOMRI samples will extend the NRDA time series and act as a segue to RESTORE funded monitoring. The GOMRI project was funded to perform the benthic analyses at the Ixtoc oil spill site, but additional samples were collected in the northern GOM near the DWH spill site. For all three studies, the independent variables to be measured include: benthic macrofauna (taxa richness and total faunal abundance), benthic meiofauna (taxa richness, total faunal abundance)... Date Entered: May 10,2017		Yes	No	No	Yes	No	Yes	No		No		$ 52,000,000.00	$ -	
	Research and Education	5593	6/23/2017	Assessing the Human Dimensions of Marine Mammal Management	NOAA Project ID#13065: In the wake of the widespread environmental and ecological destruction caused by the BP oil spill, there can be no higher priority than ensuring the health and well-being of marine mammals, fish, and other wildlife populations from this point forward. Just as these populations are monitored and managed according to the use of proper science and the best available data, so too should the human dimensions of marine mammal management (i.e., how humans interact with species, awareness of proper behavior around marine wildlife, knowledge of laws to prevent problematic interactions, etc.) be assessed methodically and scientifically. Human dimensions data collection can be accomplished through the use of focus groups and scientific, probability-based surveys, which are effective and commonly used tools for gauging the human dimensions component of resource management. It is recommended that NOAA and other resource agencies avail themselves of these methods in order to develop and evaluate communications, campaign messages, and outreach strategies designed to curb harmful interactions with marine wildlife. Ongoing human dimensions data collection can reveal trends in attitudes and opinions and identify gaps in knowledge and awareness -- such data are critical to understanding the effectiveness and impact of communications, messages, and outreach strategies, ensuring the wise allocation of funds and resources. Date Entered: May 10, 2017		Yes	No	No	No	No	No	No		No		$ 150,000.00	$ -	

	Research and Education	5594	6/23/2017	Montioring Brydeâ€™s whales in near real time from autonomous platforms to reduce anthropogenic threats	NOAA Project ID#13063: The Gulf of Mexico is home to a resident population of Brydeâ€™s whales that currently numbers less than 40 individuals and is being considered for listing as an endangered species. Gulf of Mexico Brydeâ€™s whales are subject to a number of anthropogenic threats, including ship strikes and the adverse effects of oil and oil dispersant exposure during oil spills. Effective mitigation of these threats will require a better understanding of their distribution in the northeastern Gulf of Mexico, and a means to assess their occurrence in near real time. The Woods Hole Oceanographic Institution (WHOI) has developed technology to detect, classify, and report the sounds of marine mammals in near real time from a variety of autonomous platforms, including Slocum gliders, wave gliders, and moored buoys (Baumgartner and Mussoline 2011, Baumgartner et al. 2013, Baumgartner et al. 2014). Since 2012, this technology has been used extensively on the U.S. and Canadian east coasts and in the U.S. Arctic to monitor and study marine mammals. Recent evaluations suggest that analyst-verified detections from this system are nearly 100% correct when estimating the presence of baleen whales in near real time. Detection data are immediately available on the publically accessible robots4whales.whoi.edu website, as well as by text, email, and tweet (@Robots4Whales). WHOI and NOAA are working closely with the U.S. Coast Guard to distribute these data via the Whale Alert app (www.whalealert.org), Coast Guard CG1View software, and AIS so that mariners have access to whale presence information. The objectives of the proposed project are to (1) demonstrate and evaluate near real-time detection of Brydeâ€™s whales from mobile autonomous platforms and (2) characterize the distribution and habitat of Gulf of Mexico Brydeâ€™s whales using acoustic detections from these platforms. The project seeks to use Slocum and/or wave gliders equipped with the WHOI-built near real-time acoustic monitoring system to survey the outer shelf and continental slope (100-2000 m) of the northeastern Gulf of Mexico during 2018-2019. Two surveys will be conducted per year, with each survey lasting 3-4 months. In addition to detecting Brydeâ€™s whales in near real-time, broadband audio will be recorded continuously from the vehicles to facilitate detection of other species after platform recovery. Detection data will be manually verified in near real time and distributed to the public and numerous stakeholders (including scientists, federal and state protected resource managers, Coast Guard, and the shipping industry) via robots4whales.whoi.edu, text, email, Twitter, and the Whale Alert app. After recovery of a vehicle, the recorded audio will be manually reviewed for Brydeâ€™s whale calls, and the results of this review will be compared to the detections made in near real time to determine the accuracy of the near real-time occurrence estimates. Additionally, associations between Brydeâ€™s whale acoustic detections and observations of remotely sensed sea surface temperature, surface chlorophyll, depth, and depth gradient will be statistically examined to characterize the speciesâ€™ habitat in the northeastern Gulf of Mexico. If of interest, the WHOI system can be expanded to include near real-time detection of endangered sperm whales with modest development funding. References: Baumgartner, M.F. and S.E. Mussoline. 2011. A generalized baleen whale call detection and classification system. Journal of the Acoustical Society of America 129:2889-2902. Baumgartner, M.F., D.M. Fratantoni, T.P. Hurst, M.W. Brown, T.V.N. Cole, S.M. Van Parijs, and M. Johnson. 2013. Real-time reporting of baleen whale passive acoustic detections from ocean gliders. Journal of the Acoustical Society of America 134:1814-1823. Baumgartner, M.F., K.M. Stafford, P. Winsor, H. Statscewich, and D.M. Fratantoni. 2014. Glider-based passive acoustic monitoring in the Arctic. Marine Technology Society Journal 40(S):40-51. Date Entered May 10, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 750,000.00	$ -	
	Research and Education	5597	6/23/2017	The complete picture using high resolution digital imagery	NOAA Project ID#13084: High resolution digital Imagery has the ability to fill data gaps and research needs in a wide variety of subject areas in a very quick and efficient way. In the past 9 months, 3 surveys have been carried out in the New York offshore planning area, an area covering 43,000 km2. Two of those surveys have complete datasets georeferenced and partially available to view through a publicly available web portal (https://remote.normandeau.com/nys_public_data.php). Information in the public view includes locations of over 15,000 birds, their flight height and direction of travel when flying, and locations and direction of travel of over 2000 marine mammals, 600 turtles, 1000 large bony fish, 900 cartilaginous fish, and nearly 7000 fish shoals. All are mapped and information is available to be filtered by species, making it possible to associate species presence with sea depth and other important covariates. Jelly fish are visible in the imagery, and also collected and mapped are images of boating traffic. In the fall survey, active gill net, trawler, commercial shell fishing, and recreational vessels were identified and mapped. Although these are not available in the public view, they contribute a key piece of the puzzle of what is where and why. These kinds of data are exactly what are needed in the Gulf of Mexico, to form a complete picture of how the Gulf is being used. Data collected now can be used to monitor the future success or failure of the many projects that are currently targeted to improve the overall health of the ecosystem and maintain and increase the diversity and density of animals using the Gulf of Mexico. This is the basis of this project idea. A BOEM study completed in 2013 (https://www.boem.gov/ESPIS/5/5272.pdf) found that turtle densities were under-recorded by between 4x and 10x when data were collected by visual methods using low altitude aircraft or boats. Primary reasons for this were repulsion from the survey vessel (i.e. the animals dived), and opacity of the water column from an oblique view (boat observers canâ€™t see down). The behavior of marine mammals is also influenced by vessel traffic. The same study found that estimated densities of dolphins were potentially inflated by attraction to the boat survey vessel. The camera technology available today provides massive megapixel sensors and allows for ultra high resolution, revolutionizing imagery as an efficient data collection method. The recent New York study is identifying over 90% of birds to species, and even finding flight heights for around 70% of flying birds (https://remote.normandeau.com/docs/NYSERDA%20Fall%202016_Taxonomic%20Analysis%20Summary%20Report.pdf). Marine mammal and turtle identifications are also high, with success influenced primarily by subsurface depth obscuring important diagnostic features of similar species (i.e. beaked whales). It takes 9 days to collect data across the New York offshore planning area (https://remote.normandeau.com/nys_overview.php). Vast areas of the Gulf of Mexico could have essential, very detailed data collected very quickly and efficiently. The use of high altitude (1360 feet) and high resolution (1.5 cm or better) allows detailed surveys to be provided across state and federal borders, with results highlighting patterns across the entire Gulf of Mexico. Using zigzag transect design and stopping at strategic coastal airport locations en route, the entire area from Florida to Texas could be relatively easily and quickly surveyed depending on the percent coverage deemed appropriate. Multiple seasonal surveys in a year would allow observation of variations in interseasonal and interannual density, diversity and distribution as well as identifying hotspots of foraging activity, prey locations, and anthropogenic use. The method would provide much needed data in places where data are not only sparse but frequently absent. Date Entered May 11, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	5598	6/23/2017	Stock assessment development to inform Gulf Sturgeon population status and trends as a baseline to measure PDARP actions	NOAA Project ID#13076: The Gulf of Mexico Sturgeon Acipenser oxyrinchus desotoi â€œGulf sturgeonâ€ was federally listed under the US Endangered Species Act in 1991 by NOAA and USFWS (56FR 49653). Current management units for Gulf sturgeon include seven river systems and adjacent marine habitats across the northern Gulf of Mexico. Based on PDARP review (section 5.5.7) large numbers of Gulf sturgeon were exposed to Deepwater Horizon oil, and these fish were affected by exposure. Section 5.5.7.1 of the PDARP states that to address impacts to sturgeon, restoration goals will focus on improving access to spawning areas and increasing reproductive success of Gulf sturgeon. The 2009 Gulf Sturgeon Stock Assessment completed by W. Pine and S. Martell (see https://goo.gl/RAiAH2) with funding from NOAA & USFWS was the first effort to synthesize available Gulf sturgeon population data to determine stock status and trends. We propose to update this stock assessment to re-evaluate stock status of Gulf Sturgeon following recent events that could affect sturgeon populations including hurricanes, extreme droughts, and the Deepwater Horizon oil spill. This update will include data collected as part of the NRDA response monitoring to provide a baseline of Gulf sturgeon stock status and trend in each of the seven rivers. Phase 1 (cost ~$82000): This assessment will be useful for (1) prioritizing river systems in which to direct restoration efforts to reduce risk of population jeopardy, (2) providing baseline information from which to measure Gulf Sturgeon population responses to restoration actions or future perturbations such as oil spills or hurricanes, (3) meet Gulf Sturgeon Recovery Plan goals to use population models to inform restoration and management options. Phase 2 (cost ~$260000): We will develop an electronic data entry and management system to facilitate data collection, improve data accuracy and archiving, and increase data sharing opportunities among members of the Gulf sturgeon working gro up. These tools will increase data accuracy and reduce handling time making analyses more accurate and time efficient. This will enhance feedback loops between evaluating Gulf Sturgeon population responses to restoration actions under the PDARP while meeting DOI guidelines for best data management practices. Date Entered: May 11, 2017 Date Edited: May 12, 2017		Yes	No	No	No	No	No	No		No		$ 340,000.00	$ 50,000.00	
	Research and Education	5611	6/23/2017	An acoustic stranding alert system for the Gulf Coast	NOAA Project ID#13064: Marine mammal strandings occur regularly in the Gulf of Mexico, but stranding rates increased substantially after the Deep Water Horizon (DWH) oil spill. Post-DWH, stranded odontocetes (toothed whales and dolphins) were in poor health and often presented with adrenal and lung disease, consistent with exposure to DWH petroleum products (Schwacke et al. 2014, Venn-Watson et al. 2015). Restoration of odontocete populations in the Gulf of Mexico could significantly benefit from an improved response to strandings. The Woods Hole Oceanographic Institution (WHOI) is developing an odontocete stranding alert system based on the digital acoustic monitoring (DMON) instrument that detects, classifies, and reports the sounds of marine mammals in real time (Baumgartner and Mussoline 2011, Baumgartner et al. 2013, 2014). WHOIâ€™s DMON instrument has been implemented in acoustically quiet moored buoys, which have been used successfully since 2015 to detect the presence of baleen whales in near real time (see robots4whales.whoi.edu for current buoy locations). The system is now being adapted to detect the whistles of odontocetes, and with NOAA Sea Grant support (proposal pending), an odontocete acoustic detection buoy will be tested in Wellfleet (Cape Cod), Massachusetts during 2018 as an early warning system for stranding events. A near-complete Sea Grant-funded WHOI study is demonstrating that whistles recorded just outside of Wellfleet Harbor occur reliably prior to mass strandings. Using advance warning from a near real-time acoustic detection system, animal rescue teams can significantly decrease response times and improve health outcomes by either (1) preventing animals from stranding (i.e., herding back to sea) or (2) ministering more quickly to recently beached animals. The objective of this proposal is to field, test and evaluate two odontocete stranding alert systems on the Gulf Coast. Exact locations of the proposed systems are to be determined in consultation with local stranding networks, but known or recent stranding hotspots (e.g., Hog Island, near Everglades City, FL) are likely candidates. Near real-time detection information from the buoys will be manually reviewed, and odontocete presence information will be publically accessible at robots4whales.whoi.edu. Stranding networks and the NOAA Southeast Regional stranding coordinator and staff will be alerted to the presence of odontocetes automatically by text message and email immediately after detection. Members of the stranding network will evaluate the efficacy of the early warning system by comparing outcomes before and after installation of the acoustic monitoring buoys. References: Baumgartner, M.F. and S.E. Mussoline. 2011. A generalized baleen whale call detection and classification system. Journal of the Acoustical Society of America 129:2889-2902. Baumgartner, M.F., D.M. Fratantoni, T.P. Hurst, M.W. Brown, T.V.N. Cole, S.M. Van Parijs, and M. Johnson. 2013. Real-time reporting of baleen whale passive acoustic detections from ocean gliders. Journal of the Acoustical Society of America 134:1814-1823. Baumgartner, M.F., K.M. Stafford, P. Winsor, H. Statscewich, and D.M. Fratantoni. 2014. Glider-based passive acoustic monitoring in the Arctic. Marine Technology Society Journal 40(S):40-51. Schwacke, L.H. et al. 2014. Health of common bottlenose dolphins (Tursiops truncatus) in Barataria Bay, Louisiana, following the Deepwater Horizon oil spill. Environmental Science & Technology 48:93-103. Venn-Watson, S. et al. 2015. Adrenal gland and lung lesions in Gulf of Mexico common bottlenose dolphins (Tursiops truncatus) found dead following the Deepwater Horizon oil Spill. PLoS ONE 10(5):e0126538. Date Entered: May 10, 2017 Date Edited: May 13, 2017		Yes	No	No	No	No	Yes	No		No		$ 900,000.00	$ -	
	Research and Education	5619	6/27/2017	Phase II Land Acquisition for expansion of Grand Bay NWR, NERR, Grand Bay Preserve, and Graveline Bay Preserve	This effort seeks to permanently protect lands identified by the US Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management at both Grand Bay and Graveline Bay. This project will add approximately 1,679 acres to the 20,000+ acres currently owned and managed by the USFWS and the State of Mississippi at Grand Bay and Graveline Bay. This acquisition will add critical coastal lands to the Grand Bay NWF/NERR/Preserve and the Graveline Bay Preserve for permanent protection and improved management of coastal wetlands, as well as important adjacent upland areas. The Grand Bay NWR/NERR protects one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The Graveline Bay parcels include several areas of true uplands that could be lost to residential or commercial development. The targeted 1,679 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt panne, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay and Graveline Bay include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of protected lands at Grand Bay and Graveline Bay will also expand public recreational access, research, education, and training opportunities in this unique coastal environment.The Conservation Fund is in discussions with the landowner regarding acquisition of these tracts and anticipates that the project could be completed immediately, pending availability of funds.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 4,905,000.00	$ -	Land Acquisition
	Research and Education	5621	7/3/2017	Long term acoustic monitoring of colonial waterbirds and shorebirds	NOAA Project ID#13225: Colonial waterbirds, including several listed species and species of local and regional concern, nest in large colonies along the shorelines and islands of the entire Gulf coast. These colonies are typically established within proximity to good foraging sites in suitable nesting substrate (trees, shrubs, ground) that are not excessively disturbed and provide protection from, or absence of, predators. Threats to these colonies include human disturbance, overcrowding, nesting habitat degradation, and depredation. Changes in water levels and water chemistry due to climate change presents and additional consideration when managing and protecting colonies. Colony collapse can occur if foraging sites collapse which is often tied directly to water levels at critical rearing stages. Water levels can also affect colony access by humans and by predators. Typical surveys are expensive due to the human resource needs and aerial survey needs. While these surveys are necessary, they provide snapshots of colony activity and do not provide accurate timing of events over long (decades) monitoring periods. Particularly in light of climate change, slight changes in the timing of nesting and fledging could have profound population effects over the long term. Acoustic monitoring of colonies provides a cost-effective, continuous (24 h) record of all colony activities. Acoustic cues can pinpoint episodic events such as colony predators (not all of which occur during observable, daylight hours) and natural or human disturbance; or it can provide timing information on arrival, colony establishment, chick feeding, and abandonment. Additionally, there have been several studies that have demonstrated that colony abundance can be correlated to acoustic activity. We recommend establishing a long term acoustic monitoring program in each of the Gulf states that will supplement ongoing surveys to better establish strong correlations between traditional survey methods and acoustic methods. The program can be modified as necessary to include additional colonies, areas that are under-surveyed, or areas that are part of a restoration program. A minimum of four colonies (two tree/shrub nesting and two ground nesting) in each Gulf state will be instrumented with 1 to 3 (depending on colony size) autonomous acoustic recorders prior to nesting season. Recording will be continuous until collection after nesting season. At least four sites will be equipped with iPAMâ„¢ software such that near real-time data will be sent to a web-based user portal where events can be monitored. Acoustic data will be processed for ambient sound levels, spectral content, episodic acoustic events over the average ambient levels and vocal behavior. Environmental data, survey data, and acoustic data will be analyzed for correlations specific to nesting success or failure at each site and as a whole along the Gulf Coast. We propose an initial 5-year, 5-state, 20-site program. This long term approach provides for continuous monitoring and increases sampling effort during nesting seasons throughout the Gulf Coast. Date Entered: may 15, 2017	Escambia, Hillsborough, Charlotte, Lee, Collier, Monroe, Mobile, Baldwin, Hancock, Harrison, Jackson, Cameron, Terrebonne, Lafourche, Plaquemines, Kenedy, San Patricio, Aransas, Calhoune, Refugio, Chambers, Jefferson	Yes	No	No	No	No	Yes	Yes		No		$ 580,000.00	$ -	

	Research and Education	5622	7/3/2017	Acoustic diversity assessment of offshore sand shoal habitat utilization by fishes and invertebrates and the consequences of its use in nearshore restoration using sand placement	NOAA Project ID# 13232: Much of the sand used for projects are sourced from finite, natural sand shoals in the OCS. Sand shoal habitat has been identified as potentially important fish and invertebrate habitat, and as such, BOEM and other federal agencies have invested in extensive baseline ecological studies of several sand shoal sources. Acoustic tagging, trawling, camera surveys and other traditional survey methods, while highly valuable, provide only periodic or episodic information on the species or habitat (Harris et al. 2016). Passive acoustic monitoring has proven to be a successful, cost-effective method of monitoring vocal species and enhancing the long-term understanding of species and habitat use (Roundtree 2006; Zimmer 2011). However, acoustic surveys and acoustic habitat characterization have focused on species presence/absence and ambient sound level characterization rather than the assessment of the ecosystem as whole (Pijanowski et al. 2011). Through this more holistic perspective, ecologists can assess how ecosystems, and their concomitant acoustic signatures, change due to disturbance. Objectives: This study seeks to further develop and apply acoustic diversity indices as a tool to monitor the long-term baseline and recovery of offshore sand sources where acoustic activity and variability can be correlatedâ€”at a statistically significant levelâ€”with marine ecosystem health. Therefore, a logical next step in developing goals in soundscape management is to adapt and apply novel tools for assessing acoustic biodiversity within existing data collection initiatives. This proposed study will deliver novel, adapted analytical tools that provide an assessment of acoustic diversity in local and regional soundscapes to enhance the ability to detect changes in marine sand shoal ecosystems. Methods: Data will be collected through the deployment of sensor arrays across selected sand shoal ecosystems, specifically along human-disturbance gradients. To establish how shoal soundsca pes vary across space, time, and disturbance, a suite of over three-dozen soundscape metrics will be applied to the acoustic dataset. The utility of each of these metrics and the determination of optimal monitoring schemes will be established by validating the results with traditional metrics, and through several short-term deployments with a progressive assessment of acoustic parameters, timing and level of detail from metrics, for identifying the key indices in that ecosystem. The strongest metrics will provide researchers and natural resource managers with critical information about animal activity, ecosystem dynamics, and disturbance impacts. Development of these monitoring regimes for selected ecosystems will provide a standardized assessment method and monitoring tool that can be applicable across BOEM MMP regions. This is a critical consideration because marine-based projects often suffer from comparatively high access costs. Date Entered: May 15, 2017	Harrison, Jackson	Yes	No	No	No	No	Yes	Yes		No		$ 1,500,000.00	$ -	
	Research and Education	5625	7/6/2017	Improved and/or Expanded Assessments of Trans-Boundary Marine Mammal Stocks	NOAA Project ID#13240: Many marine mammal stocks that occur in U.S. waters also range or migrate into international waters of Mexico, Cuba, and the Caribbean. Assessing trans-boundary marine mammal stocks is particularly challenging because they can be distributed widely and be taken (disturbed, injured, or killed) by fisheries, energy development, vessel strikes, and/or other human activities throughout their range. Assessment of total abundance for such stocks can require substantial survey capacity, and assessment of fishery interactions and other types of takes of such stocks requires the exchange of information with foreign or international organizations and/or governmental agencies. Complete assessment of trans-boundary stocks that were injured as a result of the Deepwater Horizon spill is essential for their recovery and restoration. Priority should be given to those stocks that are endangered or threatened, hunted, or known to interact significantly with fisheries or other human activities in international or foreign waters. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5630	7/6/2017	Regional training for standardized marine mammal and sea turtle data collection and reporting	NOAA Project ID# 13229: Marine mammals, sea turtles, fish, and invertebrates can be affected by episodic and chronic events stemming from natural cause (e.g. hurricanes), human-related causes (e.g oil spills, ocean noise, fishing, marine debris), and combinations of the two (e.g. sea level rise, ocean acidification, erosion of protective wetlands). In all cases, in order to accurately assess the type and amplitude of any stressor, monitoring and data collection must take place over the long term. However, often the data collected on marine species is highly dependent upon the context in which that data were collected. This often leaves potentially significant data out of critical analyses when data were not collected in way that maximizes use and utility across projects; or results in missed opportunities to collect supplementary data. There are several databases available and used for government, university and private surveys, the most notable being the OBIS system. While data centralization is critical for maximum use and access, equally important, is data collection standardization that includes training. This project will assess the past, present and future data collection requirements for marine mammals, sea turtles, sea birds, and whale sharks in the Gulf of Mexico. The main focus will be science- and mitigation-based surveys that are either designed for scientific data collection through surveys for one or more of the select species groups (e.g. NMFS/BOEM stock surveys and University research); or are considered platforms of opportunity for specific industry purposes that could benefit from improved scientific data collection (e.g. seismic mitigation, dredging observation, fisheries observers, Navy observers). The project will create minimum Gulf-wide data collection standards for visual, passive acoustic, and photographic data collection that will be designed to be included, as recommendations, in all activity permits. A comprehensive, on-line data collection training prog ram will be developed with user credentials and expectations established over progressive modules. Specific modules for training spill-related personnel will be developed. From here, data acquisition â€œappsâ€ such as SeaScribe will be enhanced to capture the larger data collection opportunities in â€œcitizen scienceâ€ programs or bridge watch programs, but still based on a robust data standard. The benefits from this project is that it establishes data standards that can be cross-referenced throughout the Gulf of Mexico regardless of the project. Standardized data collection, including metadata, will allow States can better coordinate management and assessment of wide-ranging species. While the data will still provide the project-specific information needed, a minimum standard will maximize the utility and sharing of that data. States can better coordinate management and assessment of wide-ranging species. The basis of the project will be a working group made up of researchers, governmental, and industry personnel involved in assessing or managing the species groups in the Gulf of Mexico Date Entered: May 15, 2017		Yes	No	No	No	No	No	No		No		$ 750,000.00	$ -	
	Research and Education	5631	7/6/2017	Designation of DeSoto and Mississippi Canyons as Marine Protected Areas	NOAA Project ID#13053: DeSoto and Mississippi Canyons provide important habitat for Brydeâ€™s whales and sperm whales, respectively, as well as for other oceanic marine mammals and deep-sea coral communities. The northern Gulf of Mexico stock of Brydeâ€™s whales inhabits DeSoto Canyon and adjacent continental slope waters extending east and south of the Canyon, and Brydeâ€™s whales are the only regularly occurring baleen whale in the Gulf (Rosel and Wilcox 2014, Rosel et al. 2016). The northern Gulf of Mexico stock of sperm whales also represent a distinct stock in the Gulf. Sperm whales are found throughout offshore waters of the Gulf, but the Mississippi Canyon represents an important feeding area (Jochens et al. 2008). Both species of large whales were impacted by the Deepwater Horizon (DWH) oil spill, with estimates of 17 percent of the Brydeâ€™s whale population killed and 6 percent of the sperm whale population killed (DWH MMIQT 2015). Mississippi Canyon was subject to intense and prolonged oiling below and at the surface during the spill (Stout et al. 2015). DeSoto Canyon was less heavily contaminated but also experienced oiling at the surface and seafloor (Brooks et al. 2015). Other marine mammals found regularly or occasionally in these areas include Atlantic spotted dolphins, Blainvilleâ€™s beaked whales, Cuvierâ€™s beaked whales, Gervaisâ€™ beaked whales, dwarf and pygmy sperm whales, oceanic and continental shelf stocks of bottlenose dolphins, pantropical spotted dolphins, Rissoâ€™s dolphins, rough-toothed dolphins, short-finned pilot whales, spinner dolphins, and striped dolphins (Waring et al. 2013). Less is known about the distribution of other oceanic marine mammals within these areas, such as Clymeneâ€™s dolphins, Fraserâ€™s dolphins, killer whales, false killer whales, melon-headed whales, and pygmy killer whales. The designation of marine protected areas was noted by the DWH Trustees as a mechanism for addressing key threats to mesophotic and deep benthic communities (PDARP/PEIS Secti on 5.5.13.3). However, no information was provided in the PDARP/PEIS on what specific areas in the Gulf the Trustees might be considering for such designation. The Commission believes that areas that provide protection for multiple species, including marine mammals, should be priorities for designation. Habitat density maps for sperm whales, Bryde's whales, and other marine mammal species that occur in these areas of the Gulf can be found at: http://seamap.env.duke.edu/models/Duke-EC-GOM-2015/ References: Brooks, G.R., et al. 2015. Sedimentation pulse in the NE Gulf of Mexico following the 2010 DWH blowout. PLoS ONE 10(7):e0132341. DWH MMIQT (Marine Mammal Injury Quantification Team). 2015. Models and analyses for the quantification of injury to Gulf of Mexico cetaceans from the Deepwater Horizon oil spill. DWH Marine Mammal NRDA Technical Working Group Report. Jochens, A., et al. 2008. Sperm whale seismic study in the Gulf of Mexico: Synthesis Report. Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana; OCS Study MMS 2008-006, 323 pp. Rosel, P.E., and L.A. Wilcox. 2014. Genetic evidence reveals a unique lineage of Brydeâ€™s whales in the northern Gulf of Mexico. Endangered Species Research 25:19â€“34. Rosel, P.E., et al. 2016. Status Review of Brydeâ€™s Whales (Balaenoptera edeni) in the Gulf of Mexico under the Endangered Species Act. NOAA Technical Memorandum NMFS-SEFSC-692. 133 pp. Stout, S.A., et al. 2015. Spatial extent (â€œfootprintâ€) and volume of Macondo oil found on the deep-sea floor following the Deepwater Horizon oil spill. (CHEM_TR.16). DWH Natural Resource Exposure NRDA Technical Working Group Report. Waring, G.T., et al. (eds). 2016. U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2015, 501 pp. Date Entered: May 9, 2017 Date Edited: May 15, 2017		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5638	7/12/2017	Reducing Red Snapper Discards Using a Collaborative Fishermen's Quota Bank	NOAA Project ID#13276: This project uses an existing Quota Bank to quantify and avoid red snapper bycatch in the commercial grouper-tilefish fishery. The Deepwater Horizon event harmed red snapper, resulting in 55-220 tons of foregone production through direct kills and in longer-term injuries, from decreased reproduction to tissue lesions. Commercial fishermen are working with managers to protect red snapper while the spillâ€™s impacts play out. But itâ€™ll be difficult to rebuild this fishery without a complete accounting for bycatch in the quota system. This project provides up-to-date data about red snapper bycatch to incorporate into quota-setting. Together with commercial fishermen, managers can proactively reduce red snapper killed through bycatch so the population can continue to recover from the spill. Red snapper managers lack reliable data on red snapper bycatch in the grouper-tilefish fishery, instead extrapolating from observer and self-reported data. This is problematic in light of commercial grouper-tilefish discards. Since red snapperâ€™s historical base was in the western Gulf, some eastern Gulf fishermen canâ€™t get allocation to retain their red snapper catch. Since discard mortality rates for commercial hook/line fisheries are 55-95%, this means red snapper quotas donâ€™t cover all red snapper killed. In order to set quotas accurately and maintain a positive rebuilding trajectory, bycatch in the commercial grouper-tilefish fishery must be accounted for. By quantifying bycatch and discards, this project ensures these dead snapper count toward the quota and are no longer wasted catch. The PDARP specifies that quota banks â€œcan help return injured natural resources and services to baseline and compensate for interim losses by reducing reef fish discards.â€ In 2015, the Gulf of Mexico Reef Fish Shareholdersâ€™ Alliance launched the first and only Quota Bank in the Gulf. The Quota Bank partners with qualified grouper fishermen in the Eastern Gulf to cover their red snapper bycatch an d assist young red snapper fishermen. There is a growing nationwide movement of permit banks. The Cape Cod Fisheries Trust, in partnership with UMass Dartmouth, proved their scallopers had minimal flounder bycatch in a newly-opened area. Permit banks in three fishing towns provide quota to cover bycatch and spatial management plans through the California Groundfish Collective. Evidence suggests Collective fishermen have less bycatch than non-participants. The Maine Coast Fishermenâ€™s Associationâ€™s building a â€œrisk poolâ€ to help fishermen avoid and account for cod catch. While quota banks are new to the Gulf, theyâ€™re a well-established tactic for helping fishermen address bycatch. This project uses the Quota Bank to quantify and avoid red snapper bycatch in the grouper-tilefish fishery. It provides up to 100,000 lbs of red snapper alocation to fishermen to cover bycatch, incentivizing participation in bycatch reduction programs, like gear research/modification and hotspot identification, and collecting bycatch data through electronic video monitoring, electronic logbooks, effort-level data collection, and NMFS observer coverage. This is a big incentive- many grouper-tilefish fishermen see discards as a serious inefficiency theyâ€™re eager to address. The study provides managers with accurate, timely bycatch data. By leasing quota to cover bycatch so red snapper arenâ€™t discarded, incidental mortality will decrease, leaving fewer unknown variables for managers. In 2016, the Quota Bank leased nearly 60,000 pounds of red snapper to 20 fishermen in the Gulf. Thatâ€™s nearly 60,000 pounds of red snapper folded into catch shares, no longer discarded at sea. Because mortality levels are so high for commercial hook/line fisheries, if it werenâ€™t for the Quota Bank, those 60,000 pounds of red snapper likely wouldâ€™ve died and wouldnâ€™t have been covered by the quota. The Quota Bank will train participating fishermen in best practices and develop ways to address their bycatch. Date Entered: May 15,2017		Yes	No	No	No	No	Yes	No		No		$ 8,500,000.00	$ -	
	Research and Education	5639	7/12/2017	Reproductive output of sea turtle nests on remote beaches in the Gulf of Mexico	NOAA Project ID# 13284: Most sandy beaches in the Gulf of Mexico (GoM) are surveyed for sea turtle nesting activity by agencies or volunteer groups. However remote beaches, particularly along GoM barrier islands, are often surveyed infrequently or not at all. Therefore, the contribution of those beaches to sea turtle population recovery is unknown. For sea turtles, there are several measures of reproductive output including clutch frequency, hatchling success, incubation duration, nesting success (# of nesting crawls/total # of crawls) and clutch size. These parameters may vary greatly among nesting beaches. Turtles nesting along the US beaches of the Gulf of Mexico represent three Recovery Management Units: Dry Tortugas, Peninsular Florida (Florida/Georgia border to Pinellas County, FL) and northern GoM; Franklin County, FL through Texas). Although part of the same population, turtles in these nesting groups differ in several ways. Hart et al. (2013) showed that turtles nesting in the northern GoM express low nesting site fidelity relative to other nesting groups and Lamont et al. (2012) suggested that turtles in the northern GoM exhibit lower nesting success (# of nesting crawls/total # of crawls) than other nesting groups. In addition, these nesting groups vary by size with the Dry Tortugas and northern GoM groups representing the two smallest groups in the population (Richards et al. 2011). Because consistent surveys are not conducted on many remote beaches used by turtles in these subpopulations, baseline data on reproductive output is not available. Without that information, increases in measures of reproductive output including number of hatchlings produced, cannot be determined. We propose to establish baseline reproductive output measures for several remote beaches in the GoM including Dry Tortugas National Park, Everglades National Park and Dog Island, FL. Date Entered: May 15, 2017	Monroe County,Franklin County,Jackson County,Harrison County	Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -	

	Research and Education	5640	7/12/2017	Reduce impact to sea turtles in the US Gulf of Mexico	NOAA Project ID#13287: Audubon Nature Institute will work to reduce the impact to sea turtles in the US Gulf of Mexico through turtle excluder device (TED) education and implementation assistance in the shrimp fishery. Funding of this project will contribute to the continued recovery of sea turtles, especially Kempâ€™s ridleys, in the Gulf of Mexico, by reducing the impact of fisheries on these populations. A major threat to the sea turtle population in the Gulf of Mexico is unintended catch by fisheries. Sea turtle habitats overlap with the Gulf of Mexico shrimp fishery and incidental capture of sea turtles in shrimp trawls has been cited as one of the many threats to their recovery. Since the 1980s, TEDs have been required in otter trawls that fish offshore, but not in skimmer trawls that typically fish in shallower waters. TEDs have been proven to reduce sea turtle mortality and NOAA studies indicate proper compliance with the upcoming TED regulations will lead to as many as 2,500 turtles protected annually (NOAA 2016). As part of this project, Audubon Nature Institutesâ€™s Gulf United for Lasting Fisheries (G.U.L.F.) plans to host industry workshops to educate fisherman about the new rule, and coordinate dock days to ensure TEDs are installed properly to increase the number of sea turtles protected in the Gulf of Mexico. Date Entered: May 15, 2017	Jefferson, Chanbers, Galveston, Brazoria, Matagorda, Jackson, Victoria, Calhoun, Refugio, Ransas, San Patricio, Nueces, Kleberg, Kenedy, Wilacy, Cameron in Texas, Cameron, Vermilion, Iberia, St. Mary, Terrebonne, Lafourche, Jefferson, Plaquemines, and St.	Yes	No	No	No	No	No	No		No		$ 340,000.00	$ 90,000.00	
	Research and Education	5642	7/13/2017	Reducing Bycatch of Marine Mammals in Commercial and Recreational Fisheries	NOAA Project ID#13303: Marine mammal bycatch refers to any marine mammal adversely affected as a result of being unintentionally entangled, entrapped, ensnared, or caught by nets, lines, traps, or hooks, or otherwise impacted by fishing gear. Bycatch is the greatest direct cause of marine mammal injury and death in the United States and around the world. Bycatch of marine mammals in Gulf of Mexico commercial fisheries has the potential to prevent the recovery and restoration of marine mammals that have been reduced as a result of the Deepwater Horizon oil spill, including bottlenose dolphin (all stocks), Atlantic spotted dolphins, pantropical spotted dolphins, pygmy sperm whales, Risso's dolphins, and short-finned pilot whale. Fisheries of particular concern include the menhaden purse seine, shrimp trawl, shark gillnet, pelagic longline, reef fish, and charter boat/headboat fisheries. Studies are needed in the following areas: - The identification of measures that can be used to reduce bycatch of marine mammals in high priority Gulf of Mexico commercial and recreational fisheries while maintaining the economic viability of those fisheries. Measures to investigate and test could include, but are not limited to, alternative fishing gear and fishing methods, time-area restrictions, and removal of lost or derelict fishing gear (i.e., traps, pots, and gillnets). - Ways to create economic incentives for reducing marine mammal bycatch through, for example, incentive-based fishery bycatch measures. - The ecological effects of fishing on marine mammals, their prey species, and the Gulf of Mexico marine ecosystem. Date Entered: MAy 15, 2017		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5646	7/14/2017	A combined physical, behavioral, and demographic approach to identify Gulf Sturgeon spawning sites in the Pascagoula River: characterizing what is known to inform the unknown	NOAA Project ID#13188: Western population segment Gulf Sturgeon (GS; natal to the Pearl and Pascagoula rivers) appear to be recovering at a slower rate than those in the east. Of all GS populations, the Pascagoula River population is estimated to be the smallest (about 220 adults). The U.S. Fish and Wildlife Service often uses the 3-R framework (representation, resiliency, and redundancy) of Schaffer and Stein (2000) to assess population recovery. Resiliency of a population is associated with the size and demographics that describe subpopulations (segregated spawning) and redundancy of subpopulations to spread extinction risks. Currently, only one spawning site is known for the Pascagoula River population (no spawning sites are known for the Pearl River), located in the Bouie River (a tributary of the Leaf River), but other spawning sites likely occur in the Chickasawhay River. This site was roughly characterized but demonstrated differences compared with spawning sites reflective of eastern population segment GS having outcroppings of sand/clay rather than limestone. Before any restoration project begins, the crucial question of â€œWhat are we restoring to?â€ must be asked. For the Pascagoula River GS population, spawning habitats represents a key knowledge gap in asking that question and in answering if this population is resilient and redundant. To overcome this knowledge gap and inform restoration we advance four objectives: 1: Characterize the Bouie River spawning site in terms of bottom hardness and steepness; sediment grain size, composition, and POC; and environmental parameters). Passive acoustic telemetry receivers will be deployed upstream, downstream, and at the spawning site to determine which individuals arrive at the site, the duration, and time-of-year. Adult GS will be tagged for the proposed project and the number of telemetered GS that may visit the spawning sites will be augmented by those tagged (using 10 and 5 year tags) for ongoing projects. 2: Deploy acoustic receivers at potential spawning sites in the Leaf and Chickasawhay rivers using data gathered in Objective 1 and previous suggestions (Heise et al. 2004). If GS are detected, the same habitat metrics as in Objective 1 will be quantified. Once quantified, a multivariate approach will be used to reduce the dimensionality of the data such that the ecologically informative parameters can be used to help identify spawning sites in other systems (e.g., Pearl River). 3: Using genetic data collected for this project and archived samples collected since 2010, we will a) perform parentage and kinship analyses to quantify relatedness among juveniles, b) determine the relative importance of individual parents to juvenile GS recruitment, and c) determine if individuals associated with various spawning sites represent genetically distinct groups (from Objectives 1-2). We will obtain sex data from juveniles and adults using circulating reproductive hormones to provide sex-ratios and the sex of potential spawners to better interpret the parentage analysis results. We propose obtaining genetic data from juveniles (rather than collecting eggs) to avoid removing potential recruits from the population. The combined genetic and sex data will provide data on the resiliency of this population. 4: Synthesize data from Objectives 1-3 to provide resource managers with information on redundancy of GS spawning habitat within the Pascagoula River watershed. These data can inform restoration and conservation measures that directly benefit GS recovery and monitor any such efforts. We anticipate this will be a collective assessment with state/federal partners. In the best scenario, the Pascagoula River population will have multiple spawning sites (redundant sub-populations) such that restoration projects could be implemented to improve habitat quality. In the worst scenario, the only spawning site for this population is in the Bouie River, and restoration efforts would focus on protecting this site. Date Entered: May 15, 2017	Forrest County,Clarke County	Yes	No	No	No	No	Yes	No		No		$ 1,100,000.00	$ -	
	Research and Education	5647	7/14/2017	Informing restoration efforts in the Mississippi Sound: Quantifying Gulf Sturgeon winter foraging habitat occupancy and coastal pelagic finfish habitat use with passive acoustic technology	NOAA Project ID#13110: Mississippi Sound currently has a variety of planned, ongoing, or completed habitat restoration projects (e.g., living shorelines, island restorations, oyster reef replenishment), and compensatory restoration projects (artificial reefs). All of these are within federally designated, critical habitat for Gulf Sturgeon (GS), and habitat for important coastal pelagic finfish (Mackerel, Red Drum). These projects have the potential to alter habitat characteristics (sediment composition, water quality, macroinvertebrate abundance) important to these fish. Restoration efforts require assessment for potential impacts on these species (e.g., loss or conversion of foraging habitat), specifically for GS. Unfortunately, most of the science related to GS habitat dependency is derived from work in their eastern range, and may not be applicable to silty-bottom habitats in the west. Additionally, artificial reef projects may enhance habitat for coastal finfish, but bury GS habitat. The objectives of this project are to describe habitat-specific occupancy patterns for GS and other coastal pelagic finfish (Mackerel, Red Drum) within Mississippi Sound, in relation to restoration projects. Specifically, we will (1) develop an acoustic telemetry array within restored and non-restored habitats to monitor acoustically tagged target species to determine habitat use and occupancy, (2) assess use patterns of these species in restored versus non-restored regions, and (3) provide a decision support tool to inform resource managers and restoration practitioners of the impacts each restoration effort has on habitat use by these species. The five-year revision of the Gulf Sturgeon Recovery Plan highlighted the need to identify habitat parameters for GS estuarine feeding habitats, especially of western populations (Pearl and Pascagoula Rivers), which have been slower to recover than their eastern counterparts; it also renewed consideration for GS habitat restoration. Habitat-specific occupancy pa tterns for GS in estuaries are lacking, particularly for juveniles and sub-adults. Therefore, we will fill knowledge-gaps related to what actually constitutes suitable GS habitat by size-class. Mackerels (Spanish and King) and Red Drum may use the same habitats as GS, but during different seasons and in different ways (prey selection). These species likely benefit from compensatory restoration more than GS, but this has not been quantified. Based on occupancy patterns of these species between restored and non-restored habitats (e.g., silty bottoms, oyster and artificial reefs, areas adjacent to living shorelines), we will determine if restoration events affected typical habitat use in the region. Because this assessment will be specific to restoration events (e.g., living shorelines, reefs) as well as to target species, the results will allow managers to determine the possible effects that implementation of each restoration type could have on the species present. This project will also create opportunities for scientists working with other acoustically tagged species in Mississippi Sound and north-central Gulf of Mexico. Methodology: Acoustic telemetry will be used to assess occupancy of target species in various restored and non-restored habitats in a paired-manner. Side scan sonar will assess habitats for hard bottom and relief prior to comprehensive characterization. We will examine sediment grain size, composition, and sedimentary POC concentrations and characterize macro-invertebrate composition and density within the footprint of telemetry stations. Bottom data loggers will measure environmental parameters within defined stations; these data will be correlated with the movements and habitat use of telemetered fishes. An occupancy index will be used to determine habitat use. Partners on this project have some of the required infrastructure, and are actively tagging GS and Red Drum with acoustic tags that should still be active during this project. Date Entered: May 12, 2017 Date Edited: May 15, 2017	Harrison County, Hancock County, Jackson County	Yes	No	No	No	No	Yes	No		No		$ 2,585,000.00	$ -	
	Research and Education	5649	7/14/2017	Restoration through education: raising awareness about the largest habitats of the Gulf of Mexico - the deep-sea	NOAA Project ID#13259: The deep sea (>200 m) represents by far the largest habitat of the Gulf of Mexico, yet it is often overlooked by resource managers, scientists and the general public, who are often unaware that rich and diverse ecosystems can thrive in deep-water environments under the right conditions. While deep-sea ecosystems are out of sight and out of mind to most people, they are not immune to anthropogenic impacts, as they are threatened by oil and gas exploration, deep-sea trawling and ocean acidification much more than their shallow-water counterparts. Improving the management, conservation and protection of the Gulf of Mexico, will ultimately require an increased appreciation for the value of its ecosystems by diverse stakeholders, and education and outreach are integral to this effort. We therefore propose to conduct a coordinated outreach and education campaign to raise awareness about deep-sea ecosystems of the Gulf of Mexico. The campaign will target both informal, as well as formal educators at the K-12 level, via the development of educational films, curricula, lesson plans and seminars. Through this targeted campaign we seek to bring the deep-sea of the Gulf of Mexico into classrooms nationwide, and thereby help restore the largest ecosystems of the Gulf. Date Entered: May 15, 2017		Yes	No	No	No	No	No	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	5654	7/18/2017	Comprehensive stewardship of breeding waterbirds across barrier and nearshore islands in the Gulf (Alabama â€“ Texas)	NOAA Project ID#13314: Waterbirds were disproportionately injured during the Gulf oil spill in 2010, particularly on barrier and bay islands. We propose to restore some of the species, including Gull-billed, Least, Common, Caspian, Royal, and Sandwich Tern, Reddish Egret, Brown Pelican, American Oystercatcher, Snowy Plover, and Wilson's Plover. National Audubon Society and partners will increase production of birds, reduce mortality, and concomitantly restore and protect habitats on which injured species rely. We will use an adaptive management framework to assess threats, implement strategies to address those threats, monitor success, and adapt both within season where appropriate, and across seasons. We will work on the four key priorities for bird restoration outlined in the PDARP. Priority 1: Restore and conserve bird nesting and foraging habitat. Objectives: At key sites, implement stewardship activities to alleviate dominant threats and improve productivity. Activities: Direct protection of nesting colonies and solitary nesters Predator control Vegetation management Erosion control Outreach and education to increase community cooperation and acceptance Expected Outcomes: Increased productivity of injured birds Priority 2: Establish or re-establish breeding colonies Objectives: Attract colonial nesting species to new or restored islands Activities: Social attraction techniques, including use of decoys and playback of vocalizations Expected Outcomes: Increased number of nesting colonies of injured species Increased probability of region-wide population persistence Priority 3: Prevent incidental bird mortality Objectives: Reduce incidental mortality of coastal waterbirds of all species. Activities: Set up recycling for monofilament line. Educate fishers about dangers of entanglement and reduce barriers to recycling. Expected outcomes: Fishers have increased awareness and compliance with monofilament recycling. Bird mortality from entanglement in monofilament reduced Priority 4: Address relevant data gaps Objectives: Using the objectives hierarchy established by the Gulf of Mexico Avian Monitoring Network, develop monitoring to fill key knowledge gaps. Activities: Develop standardized protocols for monitoring bird populations and productivity Conduct studies to ascertain the effects of predators, habitat use, and sediment type on bird productivity Expected Outcomes: Improved understanding of Gulf-wide population dynamics Gain knowledge required to prioritize areas for restoration and to develop comprehensive management plans Benefits to Public: Improved management of birds nesting on bay and barrier islands will allow for better balance between species of birds, potentially reducing human-bird conflicts. Recent studies have linked the reduction in coastal birds, lead by the reduction in many of these species of waterbirds, to an explosion in populations of Menhaden, along with a decrease in oil content, quality, and economic value of this important prey species. Restoring balance to this ecosystem by restoring predatory birds will improve livelihoods for fishers and help restore fisheries. Restoring the species harmed during the spill will improve public perception of our coasts as ideal landscapes for living, working, and recreating. It will also improve access to recreation such as bird watching. Benefits to Environment: These species are important as both predators and prey in coastal environments, thus restoring populations of waterbirds will help restore balance to marine fish community structure. Furthermore, the proposed actions will provide benefits to ecosystem services by restoring native vegetation and dune structure and by removing introduced predators that prey on other native vertebrate species. They also disperse aquatic invertebrates, change benthic species composition and abundance, change sediment composition, and improve water quality. Date Entered: May 15, 2017	Harrison County,Mobile County,Jefferson Parish,Terrebonne Parish,Galveston County,Calhoun County,Cameron County	Yes	No	No	No	No	Yes	No		No		$ 10,000,000.00	$ -	

	Research and Education	5659	7/19/2017	High Resolution Mapping of mesophotic Reefs in the Gulf of Mexico	NOAA Project ID#13330: Understanding the detailed quality, quantity and spatial distribution of marine habitats enhances our ability to manage human and natural resource activities to support sustainability, conduct restoration and maintain system function. Maps have a wide range of applications in management, planning, policy, research and restoration. Prior to DWH, map products, such as high resolution bathymetry and habitats were top priority for all Gulf of Mexico natural resource agencies in the Gulf of Mexico. This remains top priority after DWH. NOAA, led by NCCOS, and other federal and state partners will establish a habitat mapping prioritization and implementation plan. This proposal will fully leverage with the NOAA/USGS led Habitat and Water Quality monitoring network currently funded by the RESTORE Council. The plan involves three tiers: 1) develop a prioritization tool to target unmapped or poorly mapped areas in the Gulf of Mexico, 2) develop a standardized approach to map the identified targets and 3) implement mapping activities. Gaps in habitat data collection will be strategically identified and coordinated with regional state and federal mapping policies and master plans. Processes will be developed for mapping, assessment, and monitoring of numerous parameters describing the seafloor (e.g., depth, topography, and geomorphology), upstream, estuarine/coastal habitats, and associated benthic communities. While habitat mapping is a valuable stand-alone product, it is also a foundational platform upon which other research and management programs can be built. Additionally, it is expected that the oil and gas industry will significantly increase deep water exploration and the location and status of biological communities are poorly understood. Data tools and portals, such as NRDA DIVER and ERMA, developed in response to DWH are potentially being used for the phase 1 habitat/mapping synthesis. It is intended that the prioritization tool and new data will be used for st orage, query, dissemination and visualization. Additional tools will be customized for Deep Sea Coral habitat restoration, mitigation, and protected area siting. Date Entered: May 15, 2017		Yes	No	No	No	No	No	Yes		No		$ 5,000,000.00	$ 2,000,000.00	
	Research and Education	5660	7/19/2017	Research to Determine Gulf of Mexico Soundscape and Effects of Sound on Marine Mammals	NOAA Project ID#13323: The Gulf is one of the most heavily industrialized bodies of water in the world, with numerous sound-producing human activities, including commercial shipping, oil and gas development (including seismic studies), platform removals (including the use of explosives), coastal construction (including pile driving), and military operations and training. Excessive sound can cause disruption of important marine mammal behaviors, andâ€“at close rangesâ€“physiological injury. Excessive sound can also mask biologically important sounds, including communication calls between individuals of the same species. Research is needed to determine: - The Gulf of Mexico "soundscape" - sources of sound in the Gulf and associated sound levels and how they vary spatially and temporally. - The effects of bathymetry, temperature, and other oceanographic features on sound propagation. - The direct, indirect, and cumulative effects of human-caused sound on marine mammals and their prey species. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	5661	7/19/2017	Minimizing Effect of Human Sources of Sound on Gulf of Mexico Marine Mammals	NOAA Project ID#13340: Excess sound levels have the potential to prevent the recovery and restoration of marine mammal populations that have been reduced as a result of the Deepwater Horizon oil spill, particularly sperm whales, Bryde's whales, and bottlenose dolphins. Measures have been identified for mitigating the effects of anthropogenic sources of sound from coastal construction (pile driving), oil and gas exploration and decommissioning (seismic airguns and explosives for platform removals), and military training activities (sonar and explosives), but the effectiveness of those measures has not been fully tested and verified. Research and testing is needed to develop effective and reliable mitigation measures for activities that are particularly harmful or for which no measures currently exist. Mitigation should be tested for the different species and operating conditions that occur in the Gulf. Measures could include, but are not limited to, ship quieting technologies, bubble curtains and double piles (for pile driving), marine vibroseis (as an alternative to seismic airguns), and non-explosive decommissioning options (for platform removals). Also needed are effective and reliable acoustic aids (such as passive acoustic monitoring) for use in detection of marine mammals in low light or nighttime conditions. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	5662	7/21/2017	Mesophotic reef habitat enhancement.	NOAA Project ID#13339: The 2010 Deepwater Horizon (DWH) oil spill in the Gulf of Mexico (GOM) is one of the largest industrial accidents ever to occur in US waters. Extensive decontamination activities, fisheries closures, mobilization of environmental assessment resources, and restoration efforts also make this one of the most costly accidents in US history. The DWH oil spill impacted key deep-reef fish â€œsentinelâ€species, roughtongue bass, Pronotogrammus martinicensis, and tattler, Serranus phoebe, but almost nothing is known about possible long term effects and possible recovery. In addition there are several other important commercially and recreationally valuable species that were also affected (red snapper, vermilion snapper, greater amberjack, gag, and scamp) that reside on these deep water mesophotic reefs that are close (50 to 100 km) to the DWH spill site. The primary objectives of this project will be to enhance and restore deep water reef fishes by substantially increasing reef habitat through a large artificial reef deployment program, and provide a robust assessment of the effectiveness of this habitat enhancement effort. One of the most promising approaches to mitigate the reduction in reef fishes caused by the DWH oil spill event is to increase habitat for ecologically and commercially important reef fish species through an extensive and effective artificial reef program. Such habitat enhancement may also increase the resilience of these valuable resources to future disturbances. On the MS-AL continental shelf there has been an extensive artificial reef enhancement program that has been tremendously successful, but there have been few attempts at such enhancements of deeper water mesophotic reef habitats. This project will make a restore effort of such mesophotic reef habitats by adding an unprecedented number (504) of large-sized, long-lasting artificial reefs (â€œsuper-reefsâ€ 25 ft. tall pyramid reefs) to the Pinnacles reef zone in the northeast Gulf of Mexico adjacent to the DWH spill site. Artificial reef placement, particularly distance between reefs can have profound influence on the effectiveness of any given artificial reef program. Therefore the habitat enhancement of this project will be tightly coupled with quantification of the effects of reef spacing on a number of critical metrics including natural and fishing related mortality, condition, growth, abundance, biomass, production, diet, and movement of several important reef fish species (e.g., roughtongue bass, tattler, red snapper, vermilion snapper, greater amberjack, gag, and scamp) as well as community characteristics such as species richness, evenness, and diversity. This will be accomplished through application of a wide array of proven methods, each of which have been developed and optimized for this system by the Auburn University Marine Fish Lab over the last 26 years. Methods include standardized hook-and-line and trap sampling, ROV surveys, hydroacoustic surveys, fine-scale passive acoustic tracking, stomach content analysis with DNA barcoding, otolith aging techniques, genomic studies, parasitology and microbiology studies. These methods will provide a comprehensive combination of data on population and community characteristics, individual condition and growth, individual movement, and resource use, and will allow an unprecedented assessment of the effectiveness of the artificial reef deployment at different levels of reef spacing. Most importantly, this project will provide stable reef habitat for increased production of important mesophotic reef fish species. We will use a combination of field and laboratory studies to examine spatial and temporal patterns in population level (age, growth, sex ratio, and genetic population structure), individual level (toxicopathic lesions and pathogens), and molecular level (genomic expression) impacts along a gradient of exposure to polycyclic aromatic hydrocarbons (PAH). Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 9,700,000.00	$ -	
	Research and Education	5663	7/21/2017	Restoration of Mesophotic and Deep Sea Reefs using novel method, and maximum cost efficiency	NOAA Project ID#13245: Deep sea and mesophotic reefs were negatively impacted by the DWH spill. Restoring populations of corals, and other important fish habitat structure-forming benthic fauna is a massive undertaking, given the geographic area to be restored in the deep sea. Reef restoration using coral transplants, artificial structures, or both has been attempted in tropical (shallow) reefs with limited success. Coral restoration in the deep sea, or mesophotic zones presents even greater challenges, and potential costs, because of the inaccessibility and equipment required to work in the 50-1,000 meter seafloor. In order to overcome these challenges, and maximize the potential impact of of restoration costs, new technologies need to be developed and implemented, from site selection and transplanting, to logistics, and monitoring. Coramyd is a patent pending technology that integrates artificial reef structures, which are non-toxic, and can replace hundreds, or even thousands of corals within a week of ship time. The artificial reef structures used in Coramyd are not prone to corrosion, and can provide means of deploying coral transplants efficiently and successfully in large numbers. Structures are resistant to currents, and are less likely to snag fishing gear than other artificial reef structures. Structures are seeded with coral transplants, and are lowered to the seafloor using a small crane. Project scope is limited to restoration of populations of corals which were impacted by DWH spill over areas with specially sensitive and valuable fish populations. Please contact for more details and methods. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 3,260,000.00	$ -	
	Research and Education	5666	7/21/2017	Gulf of Mexico Deep Water Column Monitoring Program	NOAA Project ID#13363: The Deepwater Horizon Oil Spill (DWHOS) highlighted the lack of baseline data for deep-ocean ecosystems in the Gulf of Mexico (GoM). Of the GoM open ocean habitats, the deep water column is by far the largest affected by the DWHOS. Long-term monitoring of the diversity and abundance of the pelagic fauna (0-1500 m) of the open GoM, including oceanic fish larvae and the microbial flora, is essential for evaluating impacts of natural and anthropogenic events. We propose multi-year expansion of knowledge as a restoration tool. â€œResearch as restorationâ€ an approach with precedence, enacted after the Exxon Valdez oil spill and pursued subsequent to the DWHOS event. A 3-year (to start) sampling and analysis project that follows the methods developed during an intensive NOAA NRDA program in 2010-11 (ONSAP) and continued during 2015-2017 (DEEPEND Consortium) is envisioned. Analyses of these time series have revealed that the abundance of pelagic fishes decreased nearly an order of magnitude between 2011 and 2016. This substantial change was not obvious shortly after the spill and supports the importance of a long-term approach. Time-series investigations are known to be critical for assessment of ecosystem variability and recovery. We propose an integrated program that includes discrete-depth sampling and water collections simultaneously with acoustical sensing. With respect to surveys of economically important fishes (e.g., billfishes, tunas, dolphinfishes, swordfish), continuation of a long-term epipelagic survey of ichthyoplankton conducted during the primary spawning periods of many taxa is essential. Epipelagic and deep pelagic surveys can be merged logistically and provide insight on the vertical coupling of pelagic communities found from the surface to >1000 m. Remote sensing information and physical modeling will be used to direct the locations of at-sea sampling. We suggest that identical sampling procedures and gear used in prior surveys be adopted for future monitoring to eliminate methodological bias. In addition, a focus will be given on the continental shelf break/slope of the GoM, a region of enhanced benthopelagic coupling (e.g., sonic scattering layers intersecting benthic habitats) as well as primary foraging grounds for marine mammals and seabirds. It is also the transition area for material exchange between oceanic to continental shelf domains. The rationale for the project stems from the recent discovery that that over half of all fish species in the GoM spend all or part of their lives in the open ocean. In terms of total GoM fish abundance, deep-pelagic fishes are the most numerous. Endangered toothed whales, seabirds, and epipelagic game fishes rely on deep-pelagic fishes, squids, and shrimps as prey. Further, the transfer of energy through open ocean food webs is higher than typically assumed, suggesting a much greater role for of deep-pelagic animals in oceanic ecosystems. In short, the deep-sea animals are a key component of the GoM open ocean ecosystem. A key element of the proposed project is tight linkage with NOAA to help inform restoration planning, implementation and evaluation. We suggest using ecosystem modeling approaches to achieve this result. The project suggested here has been endorsed by the principals at NOAA who supported the initial NRDA surveys and utilized these data in the NRDA. This restoration project aligns with Water Column Fish and Invertebrates, Mesophotic and Deep Reef Communities, Marine Mammals, Birds, and Monitoring and Adaptive Management. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	No		No		$ 6,900,000.00	$ -	
	Research and Education	5667	7/21/2017	Impact of water quality conditions on submerged aquatic vegetation foraging resources for the northeastern Gulf of Mexicoâ€™s injured bird, marine mammal, and fish populations	NOAA Project ID#13452: The proposed activities directly address the NRDA and Open Ocean TIG goals of protecting and restoring habitats on which the Gulf of Mexicoâ€™s injured birds rely (PDARP section 5.5.12.1). Submerged aquatic vegetation (SAV) beds are critical habitats that constitute an important food source for regional and migratory bird populations. These activities also support the needs of several other restoration types, as SAV beds are an important habitat and foraging resource for dolphins, manatees, sea turtles, and local fish populations. Unfortunately, dramatic declines in seagrass coverage have occurred across the northeast coast of the Gulf of Mexico since the mid-1900s. Some SAV populations have stabilized and even begun to recover in recent years, but the reasons for these improving trends are not well understood. This project advances our understanding of the factors affecting SAV distribution and abundance in coastal habitats encompassing the Mississippi and Florida areas of the Gulf Island National Seashore (GUIS), and extends those insights across critical habitats along the Florida panhandle (St. Georgeâ€™s Sound and Choctawhatchee, St. Andrews, Perdido, St. Josephs, and Apalachicola Bays). Declines in SAV community health and productivity across this region have been linked to a combination of water-quality factors, including excess nutrients from nonpoint and point source pollution and increases in sedimentation and turbidity from surface runoff. Targeted monitoring will better quantify the contributions from major sources of nutrients and turbidity (wastewater treatment plants, surface runoff, and riverine inputs), as well as the timing and extent of these influxes. SAV abundance is also negatively affected by dredging, boat traffic, and shoreline modifications (e.g. bulkheads and groins). Better information on nutrient and sediment influxes will help to elucidate the relative importance of water quality conditions, other anthropogenic factors such as shoreline har dening, and natural sources of environmental variability. Hydrodynamic models will be used to examine how these factors influence SAV distribution and abundance. Multivariate statistical approaches will provide additional insights and lines of evidence to support adaptive management of the region's SAV habitats. Integrating efforts across these systems generates regional insights while building site-specific knowledge to support local restoration projects. Monthly data collection at several locations in the GUIS will build on existing monitoring programs and include measurements of temperature, salinity, dissolved oxygen, pH, light attenuation, turbidity, water column nutrient and sediment concentrations, and SAV cover and epiphyte loads. Light sensors at select sites will help to determine the importance of high frequency changes in light levels in SAV beds. During critical water-quality periods (i.e. growing season, spring runoff events, storm/flood events, and tropical storms), additional water-quality monitors will be deployed at locations not currently monitored. Monthly water quality measurements and biannual seagrass productivity surveys will also be conducted at sentinel sites in St. Georgeâ€™s Sound and Choctawhatchee, St. Andrews, Perdido, St. Josephs, and Apalachicola Bays and will also complement existing monitoring programs. Findings can help improve restoration outcomes in numerous ways. For example, this information can help reduce failure rates of expensive SAV restoration efforts by identifying optimal sites based on factors such as light attenuation, water quality conditions, and shoreline characteristics. Local nutrient sources of greatest impact can be prioritized for reductions. Information on nonpoint source inputs can inform placement of living shorelines. Costs include sample collection and processing, data management and analysis, report writing, and facilitated meetings to support knowledge transfer among scientists and managers. Date Entered: May 15, 2017	Jackson County,Escambia County,Santa Rosa County,Gulf County,Franklin County,Walton County,Bay County	Yes	No	No	No	No	Yes	No		No		$ 600,000.00	$ -	

	Research and Education	5668	7/24/2017	Genetic and chemical indicators of population health, recovery, and resilience in the Gulf of Mexico	NOAA Project ID#13450: The primary goal of this project idea is to continue monitoring population health of water column fish and invertebrate communities from the open ocean (0-1500 m) on both short (generational) and long (evolutionary) timescales, using genetic and analytical chemical methods. This information is critical for understanding the recovery, resilience and long-term consequences of the DWHOS on key deep-pelagic species. Genetic diversity is often used as a proxy to measure population health. This measurement is intimately tied to an organismâ€™s ability to survive and adapt to a changing environment. Genetic diversity can be reduced by rapid declines in population sizes following a major disturbance event. Low genetic diversity has severe consequences within a population, such as increased extinction risks and reduced recovery rates. A second metric often used to infer population, and ultimately ecosystem, health is â€œpopulation connectivity,â€• or the amount of genetic information shared and/or exchanged between populations. For this reason, determining how genetic diversity is shared and exchanged within and across the GoM has huge implications for the recovery and resilience of a species and the ecosystem. Alongside estimates of genetic diversity and connectivity, chemical analyses of deep-pelagic fauna can be measured to assess the persistence of oil-derived hydrocarbons in the environment and their potential impacts on the community. Within crude oil mixtures, PAHs (polycyclic aromatic hydrocarbons) are highly soluble in water and are relatively easily taken up by oil-exposed biota. PAHs in the water can cause lethal and sublethal effects (e.g. endocrine disruption, growth inhibition, genetic damage) to marine organisms via ingestion and/or absorption through the skin. We propose conducting a robust ten-year time series analysis that characterizes changes in genetic diversity, connectivity, and PAH exposure in deep-pelagic GoM communities. Over the past 7 years we have collected and analyzed samples of invertebrate and fish from before DWHOS, immediately following the spill (ONSAP cruises 2010-11), and 5-7 years post-spill (DEEPEND cruises 2015-17). To date, we have found several intriguing results: 1) a general increase in crustacean genetic diversity from 2011-16, suggesting possible speciesâ€™ recovery following the DWHOS 2) GoM populations have unique genetic diversity, suggesting possible â€œoilâ€•esistance 3) genetic connectivity may be linked to life history, suggesting recovery and resilience potential may be predictable 4) elevated PAHs in deep-sea fishes following the DWHOS suggesting higher intake rates compared to clearance rates 5) a recovery to baseline levels in 2015-2016 in only some biota groups (octopus) 6) continued high PAH levels in eggs, potentially affecting the long-term stability of the deep-pelagic community. We propose a continued 3-year program that builds upon our genetic and PAH datasets collected over the past seven years. First, we will continue to monitor genetic diversity and PAHs across select crustacean and fish taxa, as a measure of population health. We will use established methods implemented during the DEEPEND project, but also integrate new applications that will test for genomic signatures of population reduction or expansion and persistence of hydrocarbons in the pelagic biota. Recovery and resilience will be measured by estimating genetic connectivity within and across the GoM, capitalizing on previous and future sampling expeditions. A key element of the proposed project is tight linkage with NOAA to help inform restoration planning, implementation and evaluation. We suggest integrating the genetic diversity estimates into population/ecosystem modeling approaches, which has rarely been used in these applications. The restoration topics with which the suggested project align include Water Column Fish and Invertebrates, and Mesophotic and Deep Reef Communities. Date Entered: May 15, 2017 Date Edited: May 16, 2017		Yes	No	No	No	No	Yes	No		No		$ 2,400,000.00	$ -	
	Research and Education	5669	7/24/2017	Gulf of Mexico Open Ocean Trophic Ecology Program	NOAA Project ID#13437: The objective of this project is to examine in detail the trophic connections of fishes, cephalopods, and crustaceans (nekton, collectively) inhabiting the epi-, meso-, and bathypelagic regions of the GoM using stable isotope, fatty acid and metabarcoding analyses. The specific goal of this study is to use natural dietary tracers and metabarcoding analysis to examine the trophic ecology of meso- and bathypelagic nekton and to elucidate vertical food web structure (0 to 1500 m depth) patterns in order to quantify trophic connectivity in the northern GoM. Stable isotope, fatty acid, and metabarcoding analyses have been used successfully to examine food web structure in many systems. In this study samples collected during previous sampling efforts (NRDA Offshore Sampling and Analysis Program and DEEPEND, www.deependconsortium.org) as well as proposed sampling efforts (please see Gulf of Mexico Deep Water Column Monitoring Program project suggestion) will be analyzed for stable isotopes of carbon (Î´13C) and nitrogen (Î´15N) to evaluate food web structure, examine flow of organic matter and determine trophic relationships of target organisms collected in the GoM. Analysis of polyunsaturated fatty acids (PUFA) will serve as indicators of dietary sources, allow for the reconstruction of dietary histories, and provide additional data that may not have been elucidated through previous stomach content or stable isotope analyses. Because gut contents of many deep-sea taxa are difficult to due to mastication, metabarcoding, which allows for the identification of prey taxa by extracting species-specific DNA sequences, will be used to identify stomach contents of deep-sea crustaceans and cephalopods. Additionally, we propose to incorporate tissue analyses from upper level predators (large fishes, sharks, mammals) already collected in the GoM from colleagues over a similar spatial and temporal period. Bayesian mixing models (e.g., mixSIAR) designed for stable isotope and fatty acid data will be used to estimate prey contributions to predators. All trophic analyses will be focused on key â€œmodel speciesâ€• which will include both vertically migratory and non-migratory fish and invertebrate species with multiple feeding strategies. By examining stable isotopes, fatty acids, and gut contents of migrating and non-migrating fauna this project will shed light on the nature of energy and carbon transfer across vertical ocean zones and describe trophic connectivity in the region of the GoM where the DWHOS occurred. Results of this study will provide important information on the role of different migratory and non-migratory prey types to predators in the GoM allowing researchers to identify species or taxonomic groups that may serve as â€œvectorsâ€• between functional groups or to commercially valuable fisheries stocks, sea birds, and protected oceanic cetaceans, all of which rely on deep-pelagic nekton as prey. The detailed elucidation of feeding dynamics within the major taxa of nekton will allow for multidisciplinary studies based on the larger-scale distribution of biomass. Finally, by describing vertical and horizontal patterns in the trophic structure of deep-pelagic nekton this project will provide baseline trophic data that can be used to inform spatially explicit ecosystem models that will provide insight into the structure and functioning of the northern GoM pelagic ecosystem. Date Entered: May 15, 2017 Date Edited: May 16, 2017		Yes	No	No	No	No	Yes	No		No		$ 475,000.00	$ -	
	Research and Education	5672	7/24/2017	Adaptive management for sustainable fisheries and ecosystem restoration in the Gulf of Mexico.	NOAA Project ID#13257: Conventional single-species stock assessments determine if a fish stock is experiencing excessive fishing mortality (known as overfishing), if the stock has been reduced to low abundance (known as overfished), and forecast a sustainable fishing mortality rate. A sustainable harvest policy is prescribed by combining this rate with a forecast of fish abundance. However, projections from single-species assessments may not adequately capture uncertainty when, for instance, targeted species are co-caught by fishing gear and interact strongly, as in a reef fish assemblage. These shortcomings may be significant impediments to effective management of depleted and recovering stocks. In order to improve management decisions targeting long-term sustainability of ecosystems and fisheries in the Gulf of Mexico, we propose to develop decision support tools that are rooted in decision theory: structured decision making (SDM) and adaptive resource management (ARM) in particular. SDM (note that ARM is a special case of SDM for dynamic decisions, with scientific uncertainty) includes at least five components: management objectives, potential management actions, model of system behavior (which project consequences of management actions on the system), a monitoring program to monitor the system state and finally an optimization method to identify decision that are optimal relative to the management objectives (e.g., Martin et al. 2011). We propose a SDM/ARM framework to assist managers with identification of optimal harvest policies that balance competing management objectives (socio-economic, ecological sustainability and impact on ecosystems). We will consider multiple fish populations; specifically we intend to focus on the grouper-snapper complex. The SDM tools will be developed as extensions to stock synthesis models (Methot and Wetzel 2013), thereby integrating the SDM tools with the stock assessment and inheriting the same data uncertainties and population dynamics. We will also leverage existing Gulf of Mexico ecosystem models to project consequences of potential management actions on the system, including both Atlantis (Ainsworth et al. 2015) and Ecopath with Ecosim (Chagaris et al. 2015) models. We will additionally evaluate the performance of our decision support tool in a simulation environment using management strategy evaluation (MSE). This process will also inform data collection programs and may help end users (i.e., natural resource managers from FWC and NOAA) prioritize research to fill critical data gaps and characterize the key sources of error associated with monitoring. Specifically we would discuss how to reduce errors associated with imperfect detection and spatial autocorrelation. Our approach will require a multi-disciplinary effort to engage stakeholders, and will require elicitation of socio-economic values associated with the consequences of potential management actions. Therefore, we propose to include a human dimension component to our project. We would apply concepts of behavioral economics to gain insights into stakeholdersâ€™ behavior and to help improve the effectiveness of outreach programs. This could in turn increase voluntary fisheries-related actions to increase fish biomass. Additionally, Co-PI Dr. Luiz Barbieri will serve as the primary interface with the Gulf of Mexico Fishery Management Council, ensuring this research is aligned with the current needs of the council. This research meets the criteria for being appropriate under the Oil Pollution Act of 1990 (OPA) as it is intended to help return injured natural resources and services to baseline by supporting the development of methods which will result in increasing biomass of injured fish species (Deepwater Horizon NRDA Trustees 2016). This research will explicitly aim to reduce overfishing and bycatch of reef fishes while simultaneously achieving higher catches in the medium and long term compared to the status quo. Date Entered: May 15, 2017 Date Edited: May 16, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 1,800,000.00	$ -	
	Research and Education	5673	7/24/2017	Gulf of Mexico survey of fishing pier related sea turtle interactions	NOAA Project ID#13466 This restoration project focuses on reducing bycatch of sea turtles in pier-based recreational fisheries. We propose to implement multi-year angler surveys on fishing piers in the Gulf of Mexico, including education/outreach to rec anglers. This project could be scaled to one state, or implemented in multiple states throughout the GOM. NOAA has developed a set of pier survey forms for national implementation. The forms are currently undergoing approval by OMB under the Paper Reduction Act. We propose to use existing forms, once PRA is complete, to initiate implementation of this survey. Each pier would also be characterized, and local stranding networks would collect specific data on the nature of sea turtle captures when they occur, for comparison to the survey data. Survey results and turtle incidental capture data, would help shape the development, testing, and voluntary implementation of mitigation measures to reduce sea turtle bycatch at fishing piers. Education can help reduce mortalities so outreach efforts would include placing signs with stranding responder contact information, monofilament line recycling bins, and development of an app that can report incidental captures and strandings, provide instructions on what to do if you catch a turtle, the hotline number for the closest stranding network responder, and a way to report the interaction. Background: Sea turtle incidental capture by recreational anglers is on the rise nationwide (STSSN). Since 2010, 1,094 sea turtles, primarily juvenile Kempâ€™s ridleys, were incidentally caught in Mississippi alone. In response to captures, a pilot survey to collect data on angler fishing practices and sea turtle interactions was conducted in 2013. Anglers were asked questions about fishing practices, turtle observations and captures. Outreach was a key component of the project and was conducted at the end of each survey. The MS STSSN also collected data (bait, gear type, outcome) on every sea turtle incidental capture for comparison between angler practices and turtle interactions. Preliminary results yielded a high willingness to participate and valuable information was obtained. During and after the survey period, we noticed an increase in reported incidental captures, which could possibly be attributed to our outreach efforts. Success could be measured by a decrease in stranded turtles with fishing gear, successful rehab & release, and implementation of mitigation measures. Date Entered: May 16, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 400,000.00	$ -	
	Research and Education	5676	7/24/2017	Deer Island IV, Habitat Restoration Project, Deer Island Multi Asset Restoration Project Area	NOAA Project ID#13140: >>Overview: The goal of this project is to offset Mississippiâ€™s ongoing 200acre/yr. coastal habitat losses. The objective is to extend current assets of Deer Island eastward onto the â€œLittle Deer Islandâ€• shoal to protect coastal communities, estuarine function, ecologically/commercially important species and overall esthetic, habitat and recreation values. These assets, which include island habitats, linear sand borrow area and the Katrina Key artificial reef,currently work in concert to increase resiliency of the overall resource. According to NOAA charts, â€œLittle Deerâ€• shoal covers over 3000 acres at minus 3 feet. This NOAA Chart data will be updated with via new bathymetric survey so that restoration concepts can be refined enough to begin public outreach prior to beginning a permit application process. >>Setting: Deer Island is the larger of Mississippi's two "mainland remnant" islands. Unlike the sand barriers of the Gulf Islands National Seashore several miles to the south, both Deer Island and Round Island (about 15 miles to the west) are stable structures that have responded to sea level rise with consistent erosional losses. Deer Island measured over 800 acres in 1850 and had shrunk to about 400 acres prior to the initiation of restoration efforts 2001. >>Project background: Since 2001, the USACE Mobile District and MDMR have worked collaboratively on Deer Island to restore the footprint to approx. 770 acres. However, a significant restoration opportunity for Deer Island has yet to be initiated. A large sand shoal (â€œLittle Deerâ€• shoal) extends eastward of the current island. This area still had emergent land until a couple of decades ago and based upon local historic sea level rise rates, measured 1000 acres or more within the last 500 years. This lost habitat can be readily restored as a result of Mississippi's restoration experience and success in this type of setting. The State of Mississippi has extensive success with restoration in this shallow shoal setting recently completing 220 acres of new island and marsh habitat on a similar shoal north of Round Island. Funded by NFWF, this project captured 3.3 million cubic yards of high quality, new-cut dredged material that was otherwise destined for ocean disposal. Also, two 40 acre beneficial use / marsh restoration projects established along the northeast shore of Deer Island are nearing completion. >>Project Detail: (1) Depending upon public/agency/scientific/technical consensus- Build approximately 300 to 1000 acres of new emergent coastal habitat(island) with a similar distribution of habitats and elevations to that currently extant on Deer Island. This includes relic beach dunes, coastal maritime and savanna forest, coastal scrub-shrub, tidal flats and marshes, etc. This emergent portion may incorporate some beneficial use of dredged material in order to obtain optimum material for marsh creation. (2) Include up to a 12,000 foot extension of the Katrina Key artificialreef which is currently about 4,000 feet long and visible about 4,000 feet southwest of eastern Deer Island (visible on the project map in this submittal -blue marker). (3) Extend the parallel linear sand borrow area used for the initial MsCIP project in 2011 (also visible in this submittal- blue marker) eastward to provide optimal sand quality for the emergent portion of the project as well as providing wave energy modification to help ensure its long term stability. Note: USACE Mobile District has noted that the combination of offshore living shoreline/ breakwater and parallel linear borrow trench has significantly added to the protection of the current Deer Island from wind/wave driven erosion. (4) Oyster reefs and sea grass areas could also be developed because the project will provide significant energy reduction on large, unaltered areas of the shoal. Date Entered: May 12, 2017 Date Edited: May 16, 2017	Jackson County	Yes	No	No	No	No	Yes	No		No		$ 50,000,000.00	$ -	

	Research and Education	5677	7/25/2017	Sea turtle and mammal mortality locations	NOAA Project ID#13477: This project will increase sea turtle survival through enhanced mortality investigation and early detection of and response to anthropogenic threats. Strandings are often the only early warning indicator for at-sea mortality of sea turtles, and can be used to help identify mortality sources (ex. fisheries interactions & vessel strikes). However, documented strandings only represent a percentage of total at-sea mortality, because many factors influence whether or not a carcass will strand and be reported. These factors include, time of year, geographic location, decomposition rate and oceanographic conditions. We propose to deploy effigies, which closely mimic drift characteristics of sea turtle carcasses, in federal and state waters at ~30 locations from Texas-Florida to determine the percent of carcasses that actually strand on GOM beaches during March-July which is peak stranding season in the Gulf. Deployments will occur in areas with documented sea turtle occurrence and known shrimping effort or in areas of other potential mortality sources (i.e. ship traffic). Effigies will be deployed twice a month for five months. This project is scalable by location & duration. This methodology is successfully being used in Mississippi (Early Restoration), and expansion to other regions of the GOM is recommended. Existing ocean models are fairly adequate on a large scale; but models show major discrepancies when used to backcast small objects such as sea turtles at fine scales. The effigies are required to provide invaluable data specifically on the behavior of sea turtle carcasses in various ocean conditions in the GOM, and will be directly used for interpretation of strandings, measures of % recovery, and raw data available to the ocean modeling community to further ground truth and modify ocean models. We will also develop a web based portal that can be used by Stranding Networks, managers and enforcement to input stranding data and to provide real time back cas t model outcomes. If a spike in strandings is observed, the probable area of the mortality as determined by the back casting model can be used to help direct the efforts of the NOAA Gear Monitoring Team and state/Federal enforcement. Success will be determined by a reduction in strandings, use of program and feedback from users. This carcass drift work is focused on sea turtles, but the program could be modified to include marine mammals. Date Entered: May 16, 2017	numerous	Yes	No	No	No	No	Yes	No		No		$ 375,000.00	$ -	
	Research and Education	5688	7/28/2017	Restoration of Gulf of Mexico pelagic and broad scale fisheries: addressing movement ecology data needs	NOAA Project ID#13172: This project will use multiple tracking technologies, as well as the Integrated Tracking of Aquatic Animals in the Gulf of Mexico network (iTAG-n) and research group (iTAG-r) to collect important data, difficult or impossible to assess with traditional capture-based methods. The focal species will be: yellowfin tuna (Thunnus albacares), greater amberjack (Seriola dumerili), cobia (Rachycentron canadum), red drum (Sciaenops ocellatus), gag grouper (Mycteroperca microlepis) and red snapper (Lutjanus campechanus). The DWH oil spill occurred in the northern GoM during the spring and summer of 2010, which would overlap in space and time with either the spawning or early life stages of these species. This is of special concern with water column pelagic spawners, as where and when they reproduce (i.e., spawn) and consequent dispersal dynamics affect offspring survival in ways not seen in most terrestrial species. In addition, larval cardiotoxicity is documented for several of these species, resulting in heart-related abnormalities that could impact long-term stock productivity, especially in stocks already highly impacted by fishing and anthropogenic stressors. All focal species support important fisheries and are considered overfished, have decreasing landings or stock assessment scientists or fishermen are concerned about the stocksâ€™ health. Specific concerns associated with the focal species include: (1) yellowfin tuna landings are decreasing and deepwater oil rigs may change natural migratory behavior and spawning site selection and consequently reproductive success; (2) the greater amberjack stock is overfished and not rebuilding as expected, and there is a need to better understand how artificial reefs affect spawning site selection and fidelity; (3) the recent cobia stock assessment was inconclusive due an incomplete understanding of stock structure and connectivity and fishermen are expressing concern at low catch levels; (4) red drum were affected locally by the oil spill demonstrating anemia and presumed decreased fitness and impaired reproduction but we do not have the needed understanding of spawning migrations and connectivity to assess how this would impact the Gulfwide stock; and (5) both gag grouper and red snapper are assumed to have been impacted by the DWH oil spillâ€”and increased lesions were observed in adult red snapperâ€”but estimates of abundance and measures of recovery are hampered for both species due to a lack of movement data and cryptic mortality which may vary with habitat type, depth, and sex. This study will work closely with fishermen and integrate a series of Gulf-wide tracking projects that focus on evaluating depredation/release mortality and the effect of habitat (natural and artificial) on migratory behavior and spawning site selection. Data on migratory behavior is needed to distinguish between decreases in landings due to changes in catchability associated with changed movement behavior versus lower abundance due to the oil spill and overfishing. We propose to use multiple tagging approaches: pop-up satellite tags, archival implant tags, and acoustic telemetry tags, drawing on both the benefits of large scale tracking and the higher resolution data obtained through acoustic and archive tags. Data from this project will provide critical information needed to assess the effects of the DWH oil disaster and to predict stock resilience to spatial disturbances in the future. This in turn will support the adaptive management of NRDA fisheries projects. Date Entered: May 14, 2017 Date Edited: May 17,2017		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	5689	7/28/2017	Integrative Data Infrastructure for Gulf of Mexico Mesophotic and Deep-Benthic Habitat Assessment and Restoration	NOAA Project ID#13387: OBJECTIVES: - Build, enhance, and expand upon existing federal data management infrastructure for mapping, video analysis, and habitat suitability modeling of deep-sea corals to better support understanding and restoration of mesophotic and deep-benthic biogenic habitats. - Support the collection and analysis of new information from Gulf restoration studies and provide tools to guide and help coordinate deepwater surveys and restoration efforts. RATIONALE: Mesophotic and deep-sea coral habitats represent rare, valuable, and vulnerable communities in the Gulf of Mexico. Both mesophotic (50-150 m) and dep-sea coral (1500-1800 m) habitats were damaged during the DWH oil spill and will be a focus of restoration activities. NOAAâ€™s Deep Sea Coral Research & Technology Program is Congressionally-mandated inter-alia to: identify existing research on, and known locations of, deep sea corals; map locations of deep sea corals; conduct research on deep-sea corals, including survey techniques. The program works across NOAA Line Offices to implement studies and has developed a national database of deep-sea corals and sponges and an on-line map portal (https://deepseacoraldata.noaa.gov/). The proposed activities support both objectives of the PDARP through data analysis, advanced habitat suitability modeling, and management of relevant data: (1) Protect and manage mesophotic and deep benthic coral communities â€" The first priority is to understand the current or potential distribution of these communities. (2) Place hard ground substrate and transplant coral â€" The success of these restoration efforts will depend upon an understanding of the habitat and environmental factors that determine where such restoration activities are most likely to succeed. KEY ACTIONS AND DELIVERABLES: - Establish a Gulf of Mexico Mesophotic and Deep-Benthic Analysis & Data Management Team â€" Initial focus on Corals and Sponges and associated environmental data layers - Build capacity and supporting data management framework for image & video analysis of new and pre-existing benthic surveys â€" including image capture, analysis, and display of density, diversity, presence and absence measures for mesophotic and deep-sea corals and sponges - Develop a DSC Research Clearing House (or link to relevant existing clearing houses) with bibliographies, reports, and data summaries - Enhance the capacity of the Deep Sea Coral and Sponge Database (www.deepseacoraldata.noaa.gov) or develop new database(s) to include additional taxonomic groups and support restoration planning and monitoring. - Develop and support a state-of-the art display for data visualization and analysis (DSCRTP Map-Portal v.2), including interactive graphics and quality assurance tools. This would build on existing data infrastructure to integrate both biological (presence & absence data for coral and sponge taxa) and habitat/environmental data (multibeam mapping layers, habitat suitability modeling, oceanographic conditions). - Establish or enhance interoperability with key NOAA data systems already supporting Gulf science and restoration, including NCEIâ€™s Ocean Archive System and Office of Response and Restorationâ€™s DIVER system. - Advanced habitat suitability modeling for key taxa of restoration interest (e.g., Coral taxa identified as injured in mesophotic habitats (e.g., Swiftia exserta - Etnoyer et al. 2016, Silva et al. 2015) and deep benthic habitats (e.g., Paramuricea spp - White et al. 2012, Fisher et al. 2014). - Develop additional tools to support restoration o Animal identification guides o Data visualization tools through online map portal o Custom environmental data packages geared towards habitat modelers o Provide climatological values from the World Ocean Atlas or existing models (e.g., ROM, AEC, NCOM) o Provide multi-beam or bathymetric digital elevation models (DEMs) Date Entered: May 15, 2017 Date Edited: May 17, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 10,000,000.00	$ -	
	Research and Education	5691	7/28/2017	A demonstration project to reduce bluefin and sea turtle bycatch increasing the set depth in the Gulf of Mexico (GoM) pelagic longline fishery.	NOAA Project ID#13498: The proposed project will restore of both bluefin tuna and sea turtles through the reduction on bycatch in the pelagic longline fishery. The GoM has become an area of concern due to the bycatch mortality of spawning bluefin tuna in the directed yellowfin tuna longline fishery. As a result there have been several management measures to mitigate the bycatch of bluefin , including the required use of weak hooks in 2011 and the implementation of individual Bluefin Quotas (IBQs) in 2015. Research conducted by NOAA Fisheries in 2012 shows that setting longlines deeper than typically fished can reduce bluefin interactions with longline gear and likely increase the catch of targeted yellowfin tuna. During the study researchers deployed hook timer and temperature/depth recorders (TDRs) on the longline to determine when and at what depth yellowfin and bluefin become hooked on the longline. Researchers also deployed satellite (PSAT) tags on both yellowfin and bluefin to learn about water column utilization during the daylight period (the period when tuna are caught on longlines). TDR data showed that 70% of fishing effort occurred between 60 and 110m in depth (primary fishing zone). Results also showed a strong correlation between the proportion of tuna time spent in the primary fishing zone (from PSAT data) and CPUE. PSAT data also showed that bluefin spend a higher portion of daylight time in the primary fishing zone (near the thermocline) than do yellowfin. Results suggest that sets deployed greater than 110m have the potential to reduce the bluefin interactions while potentially increasing yellowfin catch. Research in other fisheries has also shown that deeper setting of longline gear also can reduce sea turtle bycatch. Based on these results we propose to conduct a demonstration project within the GoM pelagic longline fishery to contract vessels to make alternating sets between their normal fishing depth and sets at greater depth. If the indications from the previous research are accurate, fishers industry wide will be incentivized to fish PLL gear at greater depths due to the increase in yellowfin tuna catch. Results of the demonstration project will be decimated to the fishery through a series of workshops throughout the GoM longline fishery. The project will be monitored by observers on the project vessels. Dissemination of project results will prompt changes in general fishing practices GoM wide, which will be monitored through the mandatory observer program. Date Entered: May 17, 2017 Date Edited: May 18, 2017		Yes	No	No	No	No	Yes	No		No		$ 2,500,000.00	$ -	
	Research and Education	5707	8/1/2017	Baseline Survey of Gulf of Mexico Rod and Reel Fishing Gear Interactions with Protected Species	NOAA Project ID#13599: This project would gather baseline information necessary to inform future restoration to reduce lethal interactions between rod and reel fishing gear and protected species (i.e., sea turtles and marine mammals). The project would survey recreational anglers and for-hire vessels using rod and reel fishing gear in the Gulf of Mexico to determine the magnitude of protected species interactions with rod and reel gear. Fishing interactions between rod and reel gear and protected species are increasing in the Southeast. These interactions are problematic for both the anglers and the animals. For anglers, interactions may result in a decrease in catch, damage to gear, or frustration. For the animals, interactions cause an increased risk of death or serious injury from entanglement in or ingestion of gear, illegal retaliation from anglers, and changes in natural behaviors. For example, when a dolphin is fed, this leads to changes in the dolphinâ€™s foraging behavior, and teaches it to associate anglers with food. NOAA seeks to reduce injury and mortality to sea turtles and marine mammals from interactions with rod and reel fishing gear by fully understanding the frequency, location, and nature of interactions in the Gulf of Mexico. In this study, we will conduct systematic surveys of anglers and for-hire boat captains/owners and their patrons that fish region-wide in all coastal Gulf states, including Texas, Louisiana, Mississippi, Alabama, and Florida. The survey sampling frame will be informed by Marine Recreational Information Program Fishing survey modes. Anglers and for-hire boat captains/owners and their patrons will be asked standardized questions to inform restoration efforts, such as where they have seen protected species while fishing, describe the animalsâ€™ observed behaviors, and share details about interactions. Data on rod and reel gear interactions with protected species are limited to a few research studies, strandings records, and anecdotal reports by fish ermen. Strategic data collection on rod and reel gear interactions is needed to fully understand the frequency, geographic extent, and mode of interaction between protected species and fishing gear. Understanding the impacts, as well as where and how often these interactions occur, is vital to informing restoration efforts to reduce and prevent such interactions for the benefit of anglers and protected species. Estimated costs for this project are ~150K/state survey. Assume one survey per state for a total cost of 750K to be conducted over a 3-5 year period. Date Entered: May 22, 2017		Yes	No	No	No	No	No	Yes		No		$ 750,000.00	$ -	
	Research and Education	5710	8/1/2017	Removal of derelict fishing gear around popular shore-fishing sites (piers and jetties)	NOAA Project ID#13569: Through this project, NOAA intends to recover submerged derelict/abandoned fishing gear from popular (and heavily used) shore-based fishing locations. Derelict gear, particular monofilament fishing line, that is accidentally or intentionally left in the environment by recreational fishers is a persistent threat to sea turtles. This is the most commonly documented marine debris found on stranded sea turtles in the GOM. This abandoned/lost fishing gear significantly contributes to entanglement of sea turtles and tends to accumulate around areas used for shoreline fishing. Project locations would be selected and prioritized based on intensity of use for recreational fishing, known co-location with sea turtles (e.g., foraging areas), and frequency of entanglement/ingestion-related strandings. This project could potentially also benefit marine mammals. This project could be scaled based on available funds. Estimated 75K/site. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	No		No		$ 225,000.00	$ -	
	Research and Education	5721	8/4/2017	DWH Long-term Planning Action Analysis: Ocean Use Mapping	NOAA Project ID#13615: Conduct participatory workshops with regional ocean experts to capture community perspectives about ocean space and to create maps of past and current ocean uses across three distinct sectors: non-consumptive, fishing and industrial/military. Develop GIS data, map and analytical products, and web-based interactive viewers to guide NRDA efforts. Benefits: 1. Provides critical information about ocean uses to help guide and prioritize future emergency response and cleanup activities in order to minimize impacts and injuries to users. 2. Captures wide range of community perspectives about ocean space (i.e. how it is used, governed and managed) to complement other mapping approaches designed to document physical ocean features/properties (e.g. species distribution, biodiversity indicators, ecosystem health) 3. Provides a more complete baseline of human uses for future oil spill assessments related to lost use compensation and restoration. 4. Provides a unique and comprehensive planning resource to identify, design, prioritize and evaluate restoration projects for the efficient use of recovered funds aimed at replacing lost uses and values. 5. Provides a long-term information resource to inform broader coastal planning and management priorities that take into account current and emerging ocean uses of the ecosystem, including investment in future recreational opportunities. 6. Provides, for the first time, a comprehensive linkage between ecosystem features, functions and services and the ocean uses they support. 7. Provides the baseline data to explore linkages between existing ocean uses and documented economic values of coastal activities. Products: 1. Spatial GIS data on each ocean use and sector. 2. Analytical products illustrating patterns in ocean use, including identification of existing ocean uses at risk from spills or response activities. 3. Interactive online viewer allowing remote visualization and analysis of GIS data. Desired Outcomes: strengthened and more efficient planning for emergency response, assessment and restoration. â—¯Interactive holistic mapping product utilizable by multiple planning agencies â—¯Useful mechanism for integration with existing resources â—¯Planning product utilizable across sectors and uses Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 3,000,000.00	$ -	

	Research and Education	5725	8/10/2017	Develop rapid response techniques and advanced technologies to enable rapid assessment of deep-sea coral community ecology.	NOAA Project ID#13547: Deep-sea sediment fauna (infauna) represent important components of benthic biodiversity, and provide essential ecosystem functions including sediment bioturbation, organic matter decomposition, and energy transfer. However, due to their sedentary lifestyles and low mobility, infauna are vulnerable to disturbance, including hydrocarbon contamination and organic enrichment. Impacts associated with contaminants from the DWH spill resulted in changes in infaunal composition, diversity, and abundance. While these data represent a useful baseline for tracking post-spill changes, the long-term response of these deep-sea communities remains unclear. Sediment community assessments have traditionally used taxonomic methods for identification of fauna and diversity estimation. However, these methods are time intensive. Recent advances in high throughput environmental sequencing have enabled assessment of a wide range of metazoan taxa present in deep-sea sediments using molecular methods. Environmental sequencing has been successfully used to assess biodiversity and genetic connectivity of deep-sea and coastal sediment communities, and characterize pre- and post-spill beach sites affected by heavy oiling during the DWH spill. Environmental sequencing may elucidate connectivity among GOM habitats, potentially identifying critical habitats for biodiversity maintenance, which is important for successful recovery of impacted communities. Comparison between DNA-based data sets and taxonomic results will provide quantitative metrics to ground-truth the utility of molecular analyses in future rapid assessments. This type of DNA-based method will be useful for understanding the effectiveness of restoration efforts by providing rapid quantification of infaunal community changes with disturbance, and potentially the identification of new indicator species for future disturbance events. Sediment cores will be collected adjacent to deep-sea corals (healthy and impacted sites) and sediment fractions will undergo standard meiofaunal extraction procedures for both taxonomic and environmental sequencing. Environmental DNA will be obtained from the extract, followed by amplification and sequencing on the Illumina MiSeq platform. This methodology has been extensively tested and validated for high-throughput environmental DNA sequencing. Processing and analysis of high-throughput data will be carried out using the appropriate software tools and bioinformatic workflows. Data collected will represent a combination of high-throughput sequencing methods and traditional taxonomic approaches, providing valuable information from which to track the recovery of impacted deep-sea coral infaunal communities, guide long-term monitoring programs of deep-sea environments, and help inform the development of future restoration plans. Samples collected will be processed for environmental analysis to provide a rapid assessment of sediment communities, to identify changes in their community structure, and to isolate species-specific responses to oil spills versus other types of disturbance. This research will provide the data required for impact assessments and to measure the success of mitigations developed through adaptive management for the protection of natural resources. The cost of this effort is a function of the number of sites examined and temporal frequency of collections. Initially, this work will investigate 3 impacted and 3 healthy deep-sea coral environments where baseline information exists, on 1 cruise/year for 5 years. Other costs will include expenses for sample processing and data analysis. Additional funding would allow this work to include additional monitoring sites, including areas adjacent to coral transplants and within protected areas, which would require additional support. An ROV is required, but ship/ROV operations can be conducted in concert with other studies examining these environments. Costs, including shiptime: $11M/5yrs. Date Entered: May 20, 2017 Date Edited: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 11,000,000.00	$ -	
	Research and Education	5728	8/10/2017	Documenting temporal change in deep-sea coral sediment community structure and function in order to track long-term responses to natural and anthropogenic disturbance and inform future restoration activities	NOAA Project ID#13555: Benthic fauna provide essential ecosystem services, including nutrient cycling, biomass production, and sediment bioturbation, and a loss of benthic biodiversity has been correlated with an exponential decline in ecosystem services. Sediment macro- and meiofauna (infauna) represent important indicators of natural and anthropogenic disturbance primarily due to their sedentary lifestyle and their rapid response to change; thus, examining these communities has proven useful in impact assessments of coastal and deep-sea communities. For example, in the wake of the DWH oil spill, immediate impacts were detected in benthic communities including sediments adjacent to deep-sea corals. Annual collections of sediment adjacent to the impacted corals are tracking changes in these communities with time since the spill (2010-2016). While long-term impacts to these habitats are unknown, recovery rates are predicted to be slow with DWH derived contaminants remaining in biologically active sediments for many years. Coral-associated sediments contain benthic communities that differ from other soft sediments in the GoM, and thus recovery trajectories at these locations may differ as well, making regional generalizations inaccurate. Without the knowledge of the natural trajectory for recovery of communities, we will be unable to apply remediation tactics to restore these habitats. This research will characterize infaunal community structure at several deep-sea coral sites. Sediment cores will be collected adjacent to corals to assess infaunal abundance, diversity, evenness, and composition in ecosystems affected by different stressors. Sediment also will be processed for total organic carbon and nitrogen, hydrocarbon and metal concentrations, particle size analyses and redox conditions. Similarities and differences in benthic communities will be examined using non-metric multidimensional scaling; pairwise comparisons will be made between sites in order to estimate the percent comm unity dissimilarity/similarity and the taxa responsible for differences among coral sites. RELATE and DISTLM multivariate statistics will be used to analyze and model the relationship between the infaunal assemblage data and the environmental variables. This work will provide traditional taxonomic data that is comparable to existing datasets available at impacted and non-impacted deep-sea coral sites, and regionally for northern GoM soft-sediments, and natural hydrocarbon seeps including the environmental parameters for these habitats. This work also links to proposed research examining the environmental sequencing of sediment communities entitled: Develop rapid response techniques and advanced technologies to enable rapid assessment of deep-sea coral community ecology (USGS-Demopoulos). These comparisons will quantify community changes since the spill, estimate resilience, and determine whether these systems have recovered to comparable community structures near healthy reference areas. Assessing the community composition and biodiversity at selected deep-sea coral sites will provide baseline data for community response to contaminant exposure and critical data for future restoration projects. The cost of this effort is directly related to the number of sites examined and temporal frequency of collections. Initially, this work will investigate 3 impacted and 3 healthy deep-sea coral environments where baseline information exists, on 1 cruise/year for 5 years. Other costs will include expenses for sample processing and data analysis. Additional funding would allow this work to include additional monitoring sites, including areas adjacent to coral transplants and within protected areas, which would require additional support. An ROV is required, but ship/ROV operations can be conducted in concert with other studies examining these environments. Costs, including shiptime: $10M total for 5 years. Date Entered: May 21, 2017 Date Edited: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 10,000,000.00	$ -	
	Research and Education	5729	8/15/2017	Harrison County Sheriff's Department Training Academy	The Harrison County Sheriff's Department Training Academy is a full-service training academy that offers basic certification and advanced courses in communications, corrections and law enforcement. The academy is a collaborative partnership between the Harrison County Sheriff's Department and the Mississippi Gulf Coast Community College. The instructor pool of the Academy is comprised of practitioners; ensuring attendees receive real, practical training. The current pool of cadets come from the private and public sectors spread throughout the entire State of Mississippi. The Academy also trains self-sponsored cadets that were unemployed upon enrollment and hired by Law Enforcement Agencies upon completion of the program; the agencies that hired the trained cadets are also spread throughout the state. The Sheriff's Department is currently leasing the property and facility where the Training Academy is held and is at capacity. The Sheriff's Department is seeking funding in order to build a state of the art Training Academy that will allow them to become a premier destination for law enforcement training in the Southeastern United States.	Harrison	Yes	No	No	No	Yes	No	Yes	90	No		$ 5,000,000.00	$ -	
	Research and Education	5730	8/16/2017	40 Meters and Landward: Assessment, Monitoring, and Adaptive Management for Gulf of Mexico Coastal Ocean, Estuarine, and Riparian Habitat	NOAA Project ID#13558: This project uses novel satellite technology to provide classified habitat shoreward of approximately 40 meters water depth across the Gulf of Mexico. Because satellites pass over any location regularly, this unique project will create a time series of spatial habitat data thus allowing rapid identification of where and when change occurs. Such data are invaluable for effective, targeted restoration planning, project monitoring, and observing how the region responds to a variety of pressures. Many open ocean fish, invertebrates, marine mammals, and turtles injured during Deepwater are dependent on both nearshore and estuarine habitats. Indeed, central to many restoration planning discussions leading to the pDARP were the linkages between offshore and nearshore or estuarine habitats. This is because the most viable - and pragmatic - open ocean restoration often has a nearshore or estuarine focus. However, nearshore and estuarine habitats were also injured by the Deepwater Horizon oil spill and are further degraded by channelization, energy development, subsidence, and sea level rise. These processes will present challenges into the foreseeable future. Mitigating such losses - or even reversing them - would be most effectively achieved if one understands how and where change is most rapid. Advanced satellites now offer the capability to rapidly collect bathymetric and categorical habitat data to water depths as deep as forty meters. This capability means that broadscale maps of habitat and bathymetry covering large swaths of the continental shelves can be developed quickly and efficiently. Further, repeated satellite passes over any given area allows one to measure habitat and landform change through time. These techniques offer distinct advantages in coverage and speed over the piecemeal approaches deployed today that use aircraft, sidescan and multibeam sonars. The work will provide refined habitat data for the Gulf of Mexico, support improvements in circulati on models that all rely on bathymetric data, and offer a means to monitor change in critical habitat from 40 meters up into terrestrial environments across the Gulf of Mexico. This project will use recent developments in satellites and classification analyses to provide habitat-categorized maps of the coastal zone (inshore of the riparian out to a water depth of 40m depending on water quality). The satellite-derived timeseries of habitat data will be examined to identify those areas that are stable and those that are undergoing rapid change in elevation of habitat type. The information will be useful for states planning geoengineering, restoration personnel preparing for marsh and seagrass projects, and biologists interested in the habitats of fishes, cetaceans, and turtles. Date Entered: May 22,2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -	
	Research and Education	5734	8/16/2017	Dolphin Conservation Mobile Education/ Outreach Exhibit	NOAA Project ID#13570: This project involves developing a mobile outreach and education exhibit that would travel throughout the Gulf States to educate residents and visitors about dolphin conservation issues. The audience includes recreational fisherman, beach-goers, motorized and non-motorized recreational vessel operators, and the general public. By educating these audiences and distributing outreach materials at fishing piers, marinas, and events, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats because this audience would know how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. A large van would be purchased and wrapped with colorful, eye catching dolphin graphics and bold educational messages. Not only would this attract people during outreach but the wrap would also serve as a moving billboard that has the potential to reach thousands when traveling throughout the Gulf States. The inside of the van would be a customized exhibit illustating and educating audiences about the topics above. The budget includes funds to purchase and customize the vehicle, as well as funds for salary of an educator/driver, fuel, per diem (food/lodging), outreach materials, and insurance & maintenance of the vehicle for at least 3 years. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 500,000.00	$ -	
	Research and Education	5735	8/16/2017	Marine Mammal Conservation Print Ads in Tourism & Trade Magazines	NOAA Project ID#13575: Print ads in tourism magazines can sometimes be effective in reaching large audiences with the desire to interact with marine mammal in the wild. Unfortunately, magazines offering discounted or probono ad space usually means small ads in the back of a magazine that will most likely be overlooked. This project includes funding a contract with a marketing agency to produce and coordinate full or half page color ads with premium locations within the tourism and trade magazine that are widely distributed throughout Texas, Louisiana, Mississippi, Alabama, and Florida. Large colorful ads would attract readers and ensure these important messages are conveyed to target audiences. By choosing tourism and specific trade magazines to reach target audiences, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats because this audience would know how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 500,000.00	$ -	
	Research and Education	5736	8/16/2017	Protect Wild Dolphin Billboards	NOAA Project ID#13574: This project will reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because residents and visitors would become aware that these activities are harmful and illegal. Billboards would be used to reach large audiences with important educational messages on highly traveled roads taken by residents and visitors to coastal areas throughout Texas, Louisiana, Mississippi, Alabama, and Florida. Billboard advertisements have the largest impact on the greatest number of people and are the most cost effective method for reaching target audiences. This project includes design, print, install, and rent for media space for billboards. Billboard would convey brief but important educational messages and images about the harm in illegally feeding and harassing wild dolphins. Locations of 20 billboards will be determined by traffic patterns and distance to popular coastal area where illegal feeding and harassment has been known to occur. Billboards will be maintained in these 20 locations for 2 years to ensure constant and consistent educational messaging in a cost effective manner. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 530,000.00	$ -	

	Research and Education	5737	8/16/2017	Printing and Distribution of Marine Mammal Conservation Outreach Materials & Signs	NOAA Project ID#13572: Partners currently assist NOAA Fisheries with the distribution of dolphin conservation outreach materials and signs installation throughout the Gulf States. While these efforts are appreciated, outreach is inconsistent and often opportunistic; therefore lacking in many areas. This project would fund a full-time educator (2 years) to implement a thorough distribution plan and coordinate the installation of 800 dolphin conservation signs throughout Texas, Louisiana, Mississippi, Alabama, and Florida. The educator would document all distribution efforts and plot the installation of all signs on a map. By distributing outreach materials at fishing piers, marinas, businesses, tourism & education centers and at events, and by installing signs on waterways, piers, docks, and in marinas, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats by informing audiences about how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. Outreach materials include: (pdf of these materials: http://sero.nmfs.noaa.gov/protected_resou rces/outreach_and_education/index.html) - Protect Dolphins brochures - Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines brochures - Marine Mammal Viewing Guidelines/ How to Help a Stranded Marine Mammal cards - Dolphin Viewing Guidelines stickers - How Can You Help a Stranded Marine Mammal? Southeast U.S. Marine Mammal Stranding Network brochures - Dolphin & Whale 911 App/ SEE & ID Dolphins & Whales App cards - Dolphin Friendly Fishing and Viewing Tips/ Donâ€™t Feed Wild Dolphins cards - Cast with Care cards and stickers Signs include: (pdfs of these signs: http://sero.nmfs.noaa.gov/protected_resources/section_7/protected_species_educational_signs/index.html) - Save Sea Turtles and Dolphins - Help Stranded Marine Mammals - Protect Wild Dolphin (Harassment) - Donâ€™t Feed Wild Dolphins - Dolphin Friendly Fishing Tips Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 275,000.00	$ -	
	Research and Education	5738	8/16/2017	Marine Mammal Aerial Outreach Banners	NOAA Project ID#13571: The use of aerial banners (small plane pulling long banner) to relay important educational messages to target audiences has proven an effective outreach tool; banners can be used to educate beach-goers and motorized & non-motorized (jet skis, surfers, paddle boarders, etc.) vessel operators about presence of marine mammals and laws protecting them in the Southeast U.S. This project will reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because target audiences will become aware that these activities are harmful and illegal. The project may also reduce injury and mortality of marine mammals from vessel collisions by making vessel operators aware of the presence of whales and way to avoid vessels strikes. A banner with the message "Donâ€™t Feed Wild Dolphins, itâ€™s illegal" has been flown over areas where this harmful and illegal dolphin interaction is known to occur but also in areas where there are large numbers of tourist. These banners have reached over 300,000 people during one flight alone; this is common during spring break and other peak seasons. Banners have also been used when whales are seen close to shore and in areas where there are large numbers of motorized or non-motorized vessels near whales; the banners have made vessel operators aware of the presence of the whale(s) to avoid vessel strikes and harassment. This project involves flying aerial outreach banners in 10 coastal areas throughout Texas, Louisiana, Mississippi, Alabama, and Florida where illegal feeding and harassment activities are known to occur. The customized banners will educate people below to make them aware that these activities are harmful and illegal. Banners will be flown on 10 days each year per location; season, historic tourism numbers, and events will be considered when choosing which days the banners are flown. Banners would also be flown at times when other marine mammals (ie. orcas, Brydeâ€™s whales) are seen w ithin practical flight distance from shore and in areas where vessels are near to inform those vessel operators of the presence of whales and tips on how to avoid them. May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 180,000.00	$ -	
	Research and Education	5745	8/17/2017	Broad Scale Aerial Survey to Monitor Sea Turtle Trends in the Gulf of Mexico	NOAA Project ID#13607: This project would entail broad-scale aerial surveys of the Gulf of Mexico to monitor long-term trends in abundance of large juvenile and adult loggerheads, Kempâ€™s ridleys, and leatherback turtles. The survey would incorporate recommended survey design/methodologies from the recently convened NOAA in-water workshop. Survey methodologies would be specifically designed and implemented to ensure a robust sample design that would yield long-term trend data. This project would contribute to establishing statistically rigorous and biologically meaningful baseline abundance data and would allow for long-term monitoring of trends in abundance over time. The project would be part of a broader in-water monitoring program and would provide information not only on trends in abundance, but on distribution to help inform restoration planning and monitoring. The cost is estimated as 1M/survey year, total costs will be dependent of survey design and survey frequency. For purposes of this submission, three survey years are initially anticipated. This project could also benefit marine mammals. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	5747	8/17/2017	High Resolution Multibeam Mapping and Groundtruthing of mesophotic and deepwater corals in northern GOM	NOAA Project ID#13683: Multibeam mapping and groundtruthing of seafloor features are critical steps in understanding and protecting biological resources in the marine habitat. These data are crucial for managers and agencies to take steps to delineate areas for protection. Federal Agencies and partners, primarily National Marine Fisheries Service, Gulf of Mexico Fisheries Management Service, Bureau of Ocean Energy Management, and National Marine Sanctuaries will utilize these data for future management actions. Potential sanctuary expansion boundaries, habitat maps, assessment of HAPC and BOEMs No-Activity Zones are examples of uses of these high resolution products. While the FGBNMS has invested extensive resources over the last 20 years to map and groundtruth locations in the northwestern Gulf of Mexico, there are significant mesophotic and deepwater coral sites in the northern Gulf of Mexico lacking in multibeam coverage, and subsequent groundtruthing. As part of the groundtruthing activities, there is a need to define high density coral coverage for different depths â€“ this term is used consistently in management and science applications, but is rarely defined. In regards to this, it will be valuable to have knowledgeable experts in the areas of spatial applications, and general familiarity with the biology in these depth ranges. There may be a need to develop this capacity. The DWH NRDA trustees should consider partnering in and providing funding support to obtain full coverage of multibeam bathymetry of areas of interest, as well as support to conduct groundtruthing surveys to discern the biological resources within these areas, including defining "high density" terminology, and developing expertise capacity for key biology. These areas include the full extent of the areas encompassed by the five alternatives evaluated in the 2016 DEIS for sanctuary expansion of the FGBNMS, the full extent of the areas considered by the Gulf of Mexico Fishery Management Council for potential de signation of deep coral HAPCs, and the full extent of BOEM No Activity Zones, related buffer zones, and lease blocks, topographic features, or seismic anomalies identified in various OCS leasing stipulations as triggers for biological review and setback. Date Entered: May 22,2017 Date Edited: May 23,2017		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	5750	10/16/2017	MDMR Remote Setting Facility	The oyster industry is an integral part of the Mississippi Gulf Coast â€“ its economy, its history and its culture. The oyster industry has suffered greatly because of several natural and man-made disasters since 2005, including Hurricane Katrina, the BP Oil Spill and three separate openings of the Bonnet Carre Spillway (2008, 2011 and 2016). In 2004, oyster fishermen in Mississippi harvested nearly 500,000 sacks of oysters. In 2012, there were no sacks harvested, and in 2016, about 40,000 sacks were harvested. Gov. Phil Bryant created the Governorâ€™s Oyster Council on Restoration and Resiliency in 2015 to address the problems this industry faces and to come up with solutions. One of those solutions is a remote setting facility. The Mississippi Department of Marine Resources (MDMR) is proposing to construct, operate, and maintain a large-scale remote setting facility at the Port of Gulfport. This facility would assist in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast. The proposed funding would allow for the planning, construction, operations, and monitoring activities that will be conducted to evaluate and document restoration effectiveness. If awarded, the MDMR has the resources, procedures and personnel to implement,MDM manage and operate a large-scale remote set operation to help increase the production of the natural reefs. The proposed facility would allow MDMR to increase the amount of spat (oyster larvae after it attaches on cultch material) introduced into the MS Sound and monitor the health and growth of those oysters. Remote setting is a method of producing oysters that differs from natural oyster production. Remote setting is the production of oyster spat by setting hatchery-reared larvae onto cultch (hard material for oyster larvae to attach usually shell, crushed concrete or limestone) at a remote location from the hatchery; spat are then planted on-bottom or off-bottom. Remote setting has been successfully implemented for the production of oysters along the Pacific coast and the Chesapeake Bay areas of the United States. Remote setting was developed in the Pacific in response to low natural oyster production as a result of over harvesting, pollution, siltation, disease and predation (Jones and Jones 1983, Henderson 1983). Initially, the Pacific coast oyster industry depended on imported seed, which became an unreliable source; however, with the development of hatcheries along the Pacific coast, remote setting continued to develop and thrived (Henderson 1983). In the Chesapeake Bay Area, remote setting developed in an effort to increase oyster production and to utilize disease-resistant larvae produced by hatcheries (Congrove et al. 2009). In Mississippi, the oyster industry relies primarily on planting cultch and naturally produced oyster larvae (wild larvae) to set on the material to produce market oysters. According to the â€œStrategic Framework for Oyster Restoration Activities,â€Bbyster reefs provide a broad variety of ecosystem services, including water quality improvement, shoreline stabilization (and associated habitat protection), carbon burial, habitat provisioning for fish and mobile invertebrates (including commercially and recreationally important species), habitat for epibenthic fauna, diversification of the landscape, and oyster production for commercial and recreational harvest. Because of their reef-building capabilities, oysters are commonly referred to as natural ecosystem engineers. The complex habitat formed by oysters enhances the recruitment and growth of economically valuable and ecologically important finfish and crustaceans, thereby increasing these speciesâ€™ productivity. Oysters filter sediments, phytoplankton, and detrital particles from the water column, potentially reducing turbidity and improving water quality. Oyster reefs also promote bacterially mediated denitrification, thereby counteracting nitrogen loading. By filtering water and enhancing light penetration, oysters promote other valuable estuarine habitats such as submerged aquatic vegetation. Nearshore oyster reefs can reduce erosion and stabilize coastal shorelines through sediment trapping and accretion, and by adding hard substrate adjacent to marsh edges. Intertidal oyster beds provide foraging sites at low tide, when the shellfish are accessible, to shorebirds such as the American oystercatcher. Although native oyster reefs have declined in many regions, the Gulf of Mexico oyster reefs are among the most productive in the world, with subtidal reefs supporting a robust oyster fishery. In 2015, the Gulf States produced 53 percent of the total U.S. oyster landings, with a dockside value of $99.3 million. The eastern oyster also has cultural and historical importance to the GOM region. Oysters, along with other mollusks, have been an important food	Harrison	Yes	Yes	No	No	Yes	Yes	No		Yes		$ 9,360,000.00	$ -	
	Research and Education	5751	10/19/2017	USM Ocean Engineering and Unmanned Maritime Systems at the Port of Gulfport	Statement of Need: The State of Mississippi has made extraordinary investments in its marine science and education enterprise around the Port of Gulfport. The acquisition of the research vessel Point Sur was possible with support at the Port, and future growth of the maritime â€˜Blueâ€™ Economy will be fostered by academic research and education activities at the Port. The investments will yield results in economic and workforce development and emerging Unmanned Maritime Systems used by the US Navy, other federal agencies and industry. Statement of Work: The USM Port of Gulfport Marine Research Facility will be completed in Spring 2018, and the funds will be used to purchase state-of-the-art fabrication and engineering equipment, information and teaching technologies, building furnishings and ship support equipment. The building is constructed by Mississippi State Port Authority, and USm is entering into a long-term Lease Agreement to occupy the building. USM must provide all furnishings, information technology, research vessel support equipment and engineering/fabrication equipment. Detailed items for acquire will be submitted, but a general breakdown is provided here. Financial Request: Engineering/fabrication equipment ($1,170,000) Transport vehicles/lifting capacity ($500,000) Warehousing infrastructure ($100,000) Facility staff machinist start up ($200,000) Small boats shop ($75,000) Furnishings ($130,000) Information/teaching technology ($225,000) Total Request: $2,400,000	Harrison	Yes	No	No	No	Yes	No	Yes	50	Yes		$ 2,400,000.00	$ -	
	Research and Education	5760	1/24/2018	Understanding the cause of spontaneous abortions in cetaceans after DWH	NOAA Project ID# 13392: The proposed project seeks to better understand the physiological mechanism that resulted in spontaneous abortions of small cetaceans after the Deep Water Horizon event. The project will require access to archived tissues from stranded cetaceans. The lab analyses will include analysis of disease causing pathogens as well as baseline measurements of the endocrine and body composition of the stranded specimens. Date Entered: 5/15/2017		Yes	No	No	No	No	No	No		No		$ 300,000.00	$ -	

	Research and Education	5763	2/19/2018	Unmanned Maritime Systems Technology Program	Mississippi Gulf Coast Community College (MGCCC) seeks to work with interested partners in the development and implementation of an Unmanned Maritime Systems Technology Program to support businesses and industries that directly support the unique environmental and ecosystem structures of the coastal geography and the Northern Gulf of Mexico. The program will be located in Jackson County, Mississippi on the Jackson County Campus (JC) of MGCCC and will complement the existing career and technical programs on campus, a thriving local maritime industry, and a growing scientific community. The proposal herein will not be static and will be informed by and updated as directed by current coastal efforts associated with unmanned maritime systems, inclusive of the work of the Governorâ€™s Ocean Task Force. MGCCCâ€™s Unmanned Maritime Systems Technology Program will be a technical education program that will provide students with the opportunity to become employed in a growing industry. Information provided by the Duke Center on Globalization, Governance and Competitiveness indicates that the industry is a $156.9 million-dollar industry that is growing at a rate of 13.8% annually. The program will contain classroom, lab based, and field-based instruction and will seek out industry and university partnerships in support of the program. Courses will focus on systems IT, systems maintenance, systems operations, systems security, systems manufacturing, systems usage, troubleshooting, and the industry in general. The program location will be on the collegeâ€™s Jackson County Campus (JC). The campus is located in Gautier, Mississippi; logistically accessible from both Interstate 10 and Highway 90. The location makes it feasible for on-site programs to serve Mississippiâ€™s coast and the region beyond. Programmatically, the campus is home to academic transfer programs, workforce training programs, career, and technical programs. Programs such as programs in electronics, instrumentation and controls, systems-based electronics, and automation are complimentary programs to an Unmanned Maritime Systems Technology program. Additionally, JC is home to the collegeâ€™s Estuarine Education Center (EEC): a 40+ acre development along Mary Walker Bayou which grants water access to the Pascagoula River, the accompanying estuary systems and the Gulf of Mexico. Within the EEC are facilities offering classrooms, science labs, and industrial facilities that can/will house equipment for the operation of an Unmanned Systems program. The timeframe for development and sustainability attainment will be a period of 5 years, with year one being the development period and years 2 â€“ 5 being instructional years. It is anticipated that at the end of the 5-year period that the program will be sustainable within the college. Objective 1: Development of an Unmanned Maritime Systems Technology program at MGCCCâ€™s Jackson County Campus. Activities will include seeking accreditation for the new program, hiring of program personnel, development of curriculum, development of an industry-specific recruitment and admissions plan and identification of an advisory committee. Outcomes of these activities are approval and accreditation to begin the Unmanned Maritime Systems Technology program, program curriculum specific to this industry, a recruitment plan developed, the admissions processes established and the training location identified. Objective 2: Implementation of an Unmanned Maritime Systems Technology program. Activities for the implementation objective of the Unmanned Maritime Systems Technology program will	Jackson	Yes	No	No	No	Yes	No	No		Yes		$ 4,663,914.00	$ -	
	Research and Education	5766	2/25/2018	Reef Fish Community Permit/ Quota Bank	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Reef Fish Community Permit/ Quota Bank. Mississippi is the most under served state in the commercial Gulf reef fish fishery. Mississippi has the least amount of Gulf reef fish permit holders and individual fishing quota shareholders. This project would help to increase commercial access to reef fish species such as red snapper; a variety of groupers; a variety of tilefish; and various other fish species that require a federal Gulf reef fish permit to harvest commercially. This program would also help to reduce dead discards in the reef fish fishery by providing the needed quota to harvest fish that would otherwise have to be discarded at sea. This project would greatly benefit Mississippiâ€™s coastal economy by increasing access and landings for several species of reef fish. Mississippi's commercial fishermen, seafood dealers, seafood markets, and restaurants would all benefit from this project. Similar programs have been implemented across the Nation to provide community protections for limited access commercial fisheries. Visit www.catchinvest.com to learn more about permit and quota banks work. The need to diversify the income of seafood industry members is greatly needed due to the severe decline in revenues generated from the local oyster and shrimp industry following the BP oil spill.	Hancock,Stone,Jackson,Pearl River,George	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 1,000,000.00	$ 50,000.00	
	Research and Education	5767	2/25/2018	Seafood Traceability and Tagging Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Seafood Traceability and Tagging Program. This program would provide an electronic platform (i.e.; smart phone, tablet, and computer) and physical tags for commercial fishermen to improve domestic seafood traceability and help to eliminate fraud in the seafood industry. The need for this program arises from the prevalence of illegal and unreported seafood sales that undercurrent honest and legal seafood harvesters and businesses. This program would provide electronic reporting and tagging capabilities for commercially harvested marine species such as speckled trout, red fish, flounder, shrimp, blue crabs, and oysters. Similar programs have been implemented in federal fisheries with great success. In addition to eliminating fraud in the local seafood marketplace; this program would help promote domestically caught seafood and provide a story to the who, how, and when the seafood was caught. This program would also help to increase the value of Mississippiâ€™s commercially harvested seafood. Funds would be used to create a smart phone reporting application and purchase physical tags. Funds would also be required to employ managers of the program and conduct outreach to fishermen. An incentive base program is suggested to encourage participation in the program.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 1,000,000.00	$ 50,000.00	
	Research and Education	5768	2/25/2018	Off-Bottom Oyster Aquaculture Advancement & Investment Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Off-Bottom Oyster Aquaculture Advancement & Investment Program. Off-bottom oyster aquaculture has been proven successful in surrounding states and is currently pending permit approval in Mississippi territorial waters. This program would help establish a cooperative for potential off-bottom oyster farmers and investment capital to help jump start the off-bottom oyster aquaculture industry in Mississippi. The program would also help to increase Mississippi overall oyster production and provide stimulus to Mississippiâ€™s coastal economy. Currently, obtaining sufficient investment capital is a barrier to entry in the off-bottom oyster aquaculture industry. Preliminary estimates place the cost of entry into the industry at about $50,000 per acre. The program proposed would give traditional oyster harvesters and oyster industry members priority to access funds that could be used to establish private off-bottom oyster farms.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 10,000,000.00	$ -	
	Research and Education	5769	2/25/2018	Sea Turtle Conservation and Shrimp Trawl Vessel Electronic Monitoring Program	The Mississippi Commercial Fisheries United, Inc. proposes funding for a Sea Turtle Conservation and Mississippi Shrimp Trawl Vessel Electronic Monitoring Program. This program would initially target skimmer trawl shrimping vessels that are currently not required to use Turtle Excluder Devices (TEDs) but must adhere to tow time regulations that limit the length of the tow times to 55 minutes or 75 minutes depending on the time of the year. A pending NOAA rule has been promulgated that would require skimmer trawl vessels to use TEDs has stalled. Therefore, this program proposes a viable alternative to the use of TEDs in skimmer trawls. This program proposes funding to establish a voluntary incentive based program for Mississippi shrimpers to implement and use electronic data loggers in the cod end of shrimp nets. This data logger is water resistant and records water level data to determine when a net is submerged in water and for how long. This data would give an accurate representation of shrimp vessels adherence to tow times. These data logging units can transmit the recorded data via Bluetooth technology or be downloaded through hard wire. This data could be used to help inform compliance with tow time regulations and provide a viable alternative to the use of Turtle Excluder Devices. This technology could also be used in any type of shrimp trawl to help document effort and tow times in the shrimp fishery. This technology could also help provide verifiable data to provide shrimp buyers with tow time data to ensure quality production and add-value to domestically harvested shrimp. This program can also help the shrimp industry to obtain sustainability certification by verifying compliance with regulations that minimize lethal interactions with sea turtles.	Hancock,Jackson,Harrison	Yes	Yes	Yes	No	No	Yes	Yes		Yes		$ 750,000.00	$ 50,000.00	
	Research and Education	5771	2/25/2018	Shrimp Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Shrimp Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the shrimp industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a shrimp industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfil the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the shrimp industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 250,000.00	$ -	
	Research and Education	5772	2/25/2018	Fin-fish Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Fin-fish Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the fin-fish industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a fin-fish industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This task force would include representation from the recreational, commercial, and for-hire sectors that are engaged in the harvest of fin-fish species including but not limited to speckled trout, red fish, flounder, menhaden, reef fish, and tuna. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfil the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the fin-fish fishing industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 250,000.00	$ -	
	Research and Education	5773	2/25/2018	Oyster Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Oyster Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the oyster industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have an oyster industry task force. The Governorâ€™s oyster task force formed in 2014 but no longer convenes due to a lack of funding. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfil the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the oyster industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ 250,000.00	$ -	
	Research and Education	5774	2/25/2018	Marine Debris and Derelict Trap Removal Incentive Program	The Mississippi Commercial Fisheries United, Inc. proposes the Mississippi Derelict Marine Debris and Trap Removal Incentive Program. Similar programs have proven to be successful in removing marine debris and derelict crab traps throughout the Mississippi Sound. The difference in this program and previous program is that this program proposes to utilize both commercial trappers and commercial shrimpers to remove and properly dispose of marine debris and derelict crab/ lobster traps. Commercial shrimpers often encounter derelict crab traps in the inshore waters of the Mississippi Sound and lobster/ lionfish traps in the Gulf of Mexico. Marine debris is ongoing probably annually due to tropical storms and hurricanes. This program seeks to incentivize the proper disposal of marine debris and derelict traps that are incidentally caught to help reduce the overall mass of marine debris in the Gulf of Mexico and coastal waters. Additionally, trap fishermen would be engaged to help identify locations of derelict traps and also to help retrieve derelict trap or marine debris. A nominal stipend would be paid to legally licensed commercial fishermen participants to participate in the program. The program would also request fund to establish disposal sites (i.e.: dumpsters and fenced areas) at a locations that are convenient for the removal of marine debris and derelict traps.	Hancock,Jackson,Harrison	Yes	Yes	No	No	No	Yes	Yes		Yes		$ 2,000,000.00	$ -	
	Research and Education	5779	4/16/2018	Marketing Mississippi Seafood	The MS Department of Marine Resources is required by state statute to market seafood caught in the Gulf of Mexico and the Mississippi Sound. The agency's primary responsibility is to promote the sale and use of wild-caught Gulf seafood to consumers, dealers, processors and restaurant owners/chefs. MS Seafood is a program within the Department of Marine Resources and reaches out to various user groups in a variety of ways. The program sponsors seafood festivals, cooking events and contests in order to educate the public and users of the importance of purchasing, selling and consuming wild-caught Gulf seafood. These events are held throughout the state of Mississippi and in the Southeast region. When consumers buy local seafood, it benefits our fishermen, seafood dealers and processors, which is beneficial to our local and state economies. With this grant, MDMR is proposing to use $100,000 each year for three years in order to achieve its goal of educating all groups about the benefits of using local seafood. The agency will achieve this through sponsorships and events that educate the public about the importance of buying wild-caught Gulf seafood.	Harrison	Yes	Yes	No	No	No	No	No		Yes		$ 300,000.00	$ -	

	Research and Education	5780	5/21/2018	Ocean Springs High School Aquaculture Expansion	This project will be based on the addition of two fully equipped greenhouses at Ocean Springs High school. By adding these new greenhouses, Ocean Spring High School (OSHS) will be able to increase the number of students who take aquaculture classes at OSHS, and it will also successfully maintain the program for 3-4 years. This past year, 89 students signed up to take Aquaculture. At the current size, full capacity is 36 students (18 per class) and 18 students for aquaculture 2 classes. The addition of two new greenhouses would give each class its own building. This would increase class sizes from 18 students to 25 students in each class for a total of 75 students per year. These students will be trained and graduate with work force skills in aquaculture, water quality, and any marine fisheries job that may become available. The program also focuses on eco-restoration. In the past, the program has raised, oysters, blue crabs, speckled trout, tilapia and striped bass. The oysters, blue crabs and speckled trout were released in the Mississippi Sound. With the addition of the greenhouses, other species will be evaluated to be included in the program. The greenhouses are also used in collaboration with kindergarten and fourth grade students as they come to the high school and learn systems with planting and raising fish. Students then grow these plants in smaller greenhouses and eat what is grown. In addition to these greenhouses, a smaller greenhouse will be opened to the special education department. This greenhouse will be used by their students to grow vegetables and other resources to use in their classes.	Jackson	Yes	Yes	No	No	Yes	Yes	Yes	17	No		$ 290,000.00	$ -	
	Research and Education	5788	7/11/2018	Cedar Lake Island Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. These parcels consist of approximately 6 acres of forested shrub wetland, and 2.89 acres of estuarine and marine wetland habitat that borders both sides of the Tchoutacabouffa River. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. LTMCP protects and manages 49.71 acres adjacent to the Cedar Lake Island Land Protection project. Ecological Value: Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands.-Protects areas that provide clean water for our natural resources further down the watershed. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as birdwatching and other wildlife observation, fishing, and kayaking. -Creates open spaces that provide areas for people to witness and learn about their natural environment. -Aids in creating a continuous corridor along the Tchoutacabouffa River	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5790	7/11/2018	Tchoutacabouffa River Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. This parcel consists of approximately 26.8 acres of freshwater forested wetland, 1.35 acres freshwater pond, 5.24 acres of riverine habitat, and 6.6 acres of forested evergreen upland habitat. Bayou Costapia and Tuxachanie Creek meet the Tchoutacabouffa River at this parcel. Also, LTMCP manages and protects a total of 206 acres directly adjacent to this property along the Tchoutacabouffa River including the Tchoutacabouffa Nature Preserve. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. With the acquisition of this parcel, LTMCP would create a corridor of conservation lands 2.1 miles long along the Tchoutacabouffa River. Ecological Value: Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources further down the watershed. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as birdwatching and other wildlife observation, fishing, and kayaking -Creates open spaces that provide areas for people to witness and learn about their natural environment. -Creates a corridor 2.1 miles long along the Tchoutacabouffa River.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5795	7/20/2018	Urban Natural Resource Job Training	The MS Urban Forest Council developed a project in 1995 with EPA, creating a program to help people learn about careers in the green industry and provide job training opportunities in regard to natural resources such as landscaping, trees, food plants, growing food, land maintenance, cut flowers, and other "green jobs." The program was called 'Ribbons of Green Career and Job Training.' We are proposing this project to assist in restoring the MS Gulf Coast from injury of natural resources but also to provided valuable job training and career development. Many people are not aware of the many opportunities working with natural resources. Natural Resource Job Training and Small Business Incubator The project will include job training in the classroom and training on sites. Site for training will be identified based on topic of training, location of participants and relative to the topics. This community garden and farming space is the perfect location for a job training and small business incubator center. Not only will this project provide real-time economic opportunities to the trainees; it will also help develop and revive the surrounding communities, while rebuilding and growing the green industry along the MS Gulf coast. This project would create training programs that satisfy needs of employers in the state. The following programs would be implemented: Job training and certification as a trained individual would be provided for each of these topics. Individuals participating will complete the whole training program. Trainers will provided assistance in obtaining jobs in these areas of service or be trained to develop their own company to provide these service areas. 1.Farming-Food, vegetable, fruit and herb production a.Vegetable growing and harvesting b.Nursery training (growing seedlings & fruit tree propagation) c.Cut flower growing, harvesting d. Landscape gardening e. Arborist g. Yard Maintenance 2.Value-added processing		Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ 323,000.00	$ 75,000.00	
	Research and Education	5796	8/6/2018	Phase 2 Land Acquisition for expansion of Grand Bay National Wildlife Refuge and National Estuarine Research Reserve	This effort seeks to permanently protect lands identified by the U. S. Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management by the Grand Bay National Wildlife Refuge (NWR) and Grand Bay National Estuarine Research Reserve (NERR). This project will add approximately 1,686 acres to the nearly 18,000 acres currently owned by the U.S. Fish and Wildlife Service and the State of Mississippi. It will add critical coastal lands to the Grand Bay NWR/ NERR for permanent protection, and improved management of coastal wetlands, and adjacent upland areas. The Grand Bay NWR/NERR protect one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The targeted 1,686 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt pannes, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay Refuge/ NERR include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of the Grand Bay NWR/NERR will also expand public recreational access, research, education, and training opportunities in this unique coastal environment. The Conservation Fund has initiated due diligence with financial assistance from the Knobloch Family Foundation, is in discussions with the landowner regarding acquisition of these tracts, and anticipates that the project could be completed immediately, pending availability of funds.	Jackson,Mobile	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5798	8/6/2018	Connecting and Extending Conservation Corridors in Coastal Counties	The Land Trust for the Mississippi Coastal Plain (LTMCP) is a nationally accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological significance in Hancock, Harrison, Jackson, George, Stone, and Pearl River Counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools to target priority conservation lands for the benefit of coastal Mississippi habitats, species, and recreation. The goal of this project is to provide funding to purchase individual parcels of land, which may be relatively small in acreage but are located in areas that have been identified as crucial to extending corridors of existing conservation lands. The Land Trust has identified several sites that would expand key conservation corridors presently owned by LTMCP, the Mississippi Secretary of Stateâ€™s Office, as well as the Mississippi Department for Marine Resources. These sites can be found on the Mississippi Department of Environmental Qualityâ€™s portal (www.restore.ms): project numbers 5436 Brickyard Bayou Land Protection, adjacent to the Pascagoula River Coastal Preserves owned by MDMR; 5788 Cedar Lake Island Land Protection, adjacent to the LTMCP Cedar Lake Island Preserve; and 5790 Tchoutacabouffa River Land Protection, adjacent to LTMCP Tchoutacabouffa Nature Preserve. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi Sound. Ecological Value: -Contributes to continuous corridors of conservation land. -Provides valuable habitat for a wide variety of native plants and wildlife, as well as migratory birds. -Protects upstream areas that support clean water. -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. -Provides a natural function of turnover and flushing of coastal wetlands. -Provides opportunities for educational, low impact recreational activities such as birdwatching and other wildlife observation.	Jackson,Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5799	8/8/2018	Pascagoula Tributaries Nutrient Reduction Project	The Gulf of Mexicoâ€™s health and productivity is directly and significantly influenced by the quality and quantity of fresh water delivered bays and estuaries in the Mississippi Sound. In turn the quality and quantity of water in major tributaries such as the Pascagoula River is heavily influenced by land use and the condition of its tributary rivers. To make meaningful, measurable improvements to the Pascagoula Rivers water quality and quantity it is necessary to start in these tributary rivers and watersheds. The Pat Harrison Waterway District has the legal authority and administrative mechanisms to coordinate federal and state agency activities to improve water quality and quantity in the Pascagoula Basin and actively engage County and local governments in those efforts. In particular projects coordinated with county and city officials in the Bouie, Leaf and Chickasawhay Rivers and watersheds can measurably and significantly improve the quality and quantity of water flowing into the Pascagoula River, the Pascagoula estuary and on to the Gulf of Mexico. Specific activities include but are not limited to; 1) restore natural flows by removing debris, trees, logs, sediment and foreign objects from these rivers and their tributaries; 2) restore and protect degraded river/tributary banks by implementing structural and non-structural measures; and 3) identifying and addressing nonpoint sources of nutrient loading in these rivers and their tributaries.	Jackson,George	Yes	No	No	Yes	No	Yes	No		Yes		$ 5,000,000.00	$ -	
	Research and Education	5800	8/9/2018	Kittiwake Coastal Conservation Area	Kittiwake Conservation has been able to identify some acreage in Pass Christian that appears suitable for coastal preservation. This property was partially used as part of the Camp Kittiwake, a church camp used into the 1950â€™s, then partially developed as a residential subdivision, Kittiwake, and for the Kittiwake Baptist Church. The remaining 12 acres has laid fallow for the past 50 years. Our neighborhood group, loosely organized as Kittiwake Conservation, see the area being retained for its natural features; its vegetation and wildlife, as while adjacent to the Island beach. The area presents itself as an area where local runoff can be filtered naturally prior to reaching the Sound, reducing the number of beach closures in the area after heavy rainfall. Presently, the acreage is semi-wetland forest, and the home to herons, eagles, osprey, fox, bobcat, racoon, armadillo and rabbits. This property (11.8 acres) was recently purchased by an individual in 2017, and has expressed some interest in allowing the acreage to be used as a park, a wildlife preserve, a conservation area, and appears willing to part with the land for such uses. Across US 90 is the sand beach. This area has often been "closed" due to high bacterial count, particularly after heavy rainfall. This tract of land could be used to develop a series of â€œswalesâ€ to naturally filter the surface water of sediment and pollutants prior to reaching the Sound, and some existing underground water routes could be rerouted into the same system of swales. There are few intact land parcels available along Beach Boulevard that have not been through development, especially over the past 50 years. This is a parcel that has been neglected and allowed to become its own wildland. With minimal development it could become its own show piece of what upland areas would have looked like prior to significant development. A trail meandering through from Second Street to Beach Boulevard might be the extent of developing the area. A parking area on each end would allow the visitor to enjoy the woodland. School groups could grasp an earlier time. This woodland/park can be used as an outdoor school site exploring natural habitats, bird watching and learning about the natural filtering systems. These are just a few ideas for school, civic, scouting and tourist groups. Aside from the direct expense of acquiring the parcel, creating a parking area, a trail, trail signage, and a perimeter fence, would be the minimal expense. An architectural plan to enhance the site, creating a natural filtration system, or redirecting current drainage lines would increase the cost factor quickly. Would the City of Pass Christian take up maintenance, or the County Sand Beach Commission, or some other entity is unknown? This project could be combined with similar coastal projects nearby.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 3,000,000.00	$ -	Land Acquisition

	Research and Education	5803	8/10/2018	Establishment of a Coastwide Reference Monitoring System (CRMS) in Mississippi	NOAA Project ID# 13891: Expansion of a Coastwide Reference Monitoring System (CRMS) wetland observation network into Mississippi to inform wetland restoration success and also assist with Trustee ecosystem restoration quantification. The proposed project would build off of the existing CRMS wetland monitoring system being implemented in Louisiana. In Louisiana CRMS was designed to monitor the effectiveness of restoration actions at multiple spatial scales from individual project sites and the influence of these projects throughout the coastal zone. The LA CRMS design includes sites for swamp habitats along with fresh intermediate, brackish and salt marshes. This project could be implemented for swamp and marsh or only marsh if needed depending on the need. The following data types are proposed record land change, hydrologic, soils and vegetation including aerial imagery, accretion and surface elevation, vegetation, soil porewater salinity, soil properties, hydrographic. Additional activities such as data management and visualization, data analysis, report cards would be built into to the project as necessary and appropriate. This project would aim to build off of and leverage existing efforts in the State of Mississippi where possible. NOAA Project ID# 13891 Date: Aug 7, 2018		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	5804	8/10/2018	Long Beach Harbor Enhancements	NOAA Project ID#13889: The Long Beach Harbor serves mainly recreational boaters. However, that recreational use is the basis for a robust business community that serves tourists, fishermen, boat owners, restaurant diners, and pedestrians. The Harbor has been repeatedly damaged by natural (Hurricane Katrina) and man-made (BP Oil Spill) disasters. The natural disasters have destroyed and damaged the harbors channel, breakwaters, and support infrastructure (gas lines, power, etc.). The BP Oil Spill damaged many boats docked in the harbor and made tenants less likely to dock in the harbor. These direct impacts drove away the secondary commercial businesses that relied on the port such as fuel docks, bait shops, restaurants, etc. Date: Aug 7, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 60,000,000.00	$ -	
	Research and Education	5808	8/10/2018	Quantifying water availability and quality from submarine discharge points into Gulf estuaries	NOAA Project ID# 13883: As resource managers continue to understand the effects of water availability and quality from freshwater systems that drain to Gulf estuaries and bays, one source that is typically unaccounted for comes from submarine outcrops from near-shore aquifers. The USGS has recently updated the Coastal Lowlands Aquifer System (CLAS) groundwater model which can be used to estimate groundwater flow and quantify estimates of water quality/nutrient loads from submarine discharges. Specifically, this project will utilize the updated CLAS model to address groundwater and groundwater/surface-water issues along the Gulf coast to: 1. develop an approximate water budget of groundwater flow to/from the coast; 2. evaluate subsidence related to groundwater withdrawals; 3. evaluate changes in groundwater withdrawals and effects on water budget and water levels which can be used to evaluate scenarios related to increases in GW withdrawals for public-supply, industrial, and irrigation water use; 4. evaluate potential saltwater intrusion; and 5. use groundwater flow quantities and water chemistry data to estimate nutrient loads into Gulf estuaries from submarine waters sources (which can then provide a better understanding of Harmful Algal Boom hotspots across the Gulf). This project could leverage an existing project by the University of Southern Mississippi that is already underway funded by a grant from the Mississippi Water Resources Institute that focuses on identification of groundwater seeps within the Mississippi Sound. Also, this project is indirectly related to priorities of the Water Resources Priority Issues Team of the Gulf of Mexico Alliance to better understand occurrence and distribution of HAB outbreaks in nearshore areas around the Gulf. Date: Aug 6, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 3,000,000.00	$ -	
	Research and Education	5809	8/10/2018	Development of a Decision Support System to address management of nutrient and sediment loads entering bays and estuaries from Gulf watersheds.	NOAA Project ID# 13877: This project will build an online Decision Support System (DSS) that will allow managers to run scenarios by altering identified sources of nutrients or sediment within Gulf watersheds to see the downstream effects of those scenarios on nutrient and sediment loads entering bays and estuaries across the Gulf. The DSS will be based on development of Total Nitrogen, Total Phosphorus, and Suspended Sediment Spatially-Referenced Regressions on Watershed Attributes (SPARROW) models for the entire Gulf. In addition, display of model results in the DSS can help managers target watershed areas with high nutrient loads to better locate Best Management Practice implementation. Nutrient load estimates from the models entering bays and estuaries can also be used as nutrient inputs to available hydrodynamic models to identify potential hot spots across the Gulf for Harmful Algal Bloom outbreaks. Sediment models can help locate hot spot areas for high sediment loads within Gulf watersheds, which could be important to manage wetland restoration. Date Aug 1, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 4,000,000.00	$ -	
	Research and Education	5810	8/10/2018	Restoration of Piping Plover and other overwintering shorebirds through reductions in anthropogenic stressors	NOAA Project ID# 13873: The impact of habitat loss on shorebirds may be exacerbated by disturbance from human recreational use, which further reduces the amount of coastal habitat that is functionally available. This can have consequences for the condition of individual birds or for population processes, both of which should be considered in strategies to reduce conflict between shorebirds and recreational users of coastal habitat. Our objectives were to implement measures to mitigate the negative impacts from human recreational use, coastal habitat modifications to Piping Plover (Charadrius melodus) body condition and demography. Also applies to additional overwintering bird species. The condition of these overwintering species may influence reproductive output, through cross-seasonal effects and areas that are heavily disturbed can result in reduced reproductive output from affected individuals (Gibson et al. 2018). July 31, 2018		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5812	8/10/2018	Groundwater-neutral strategies to create habitat for migratory shorebirds on private lands of the Mississippi Delta	NOAA Project ID# 13868Summary of rationale and proposed project: Nearly half of North American shorebird species (such as sandpipers and plovers) are declining, and a key factor in these declines is a loss of available habitat for migration stopover, especially in fall (July-October) when such habitat is more limited. To mitigate the impact of the Deepwater Horizon oil spill on this group of birds, we need high-quality stopover habitat for them not just on the immediate Gulf Coast, but also away from the Gulf Coast, in the MS Delta. Private lands, including aquaculture farms and former aquaculture farms being managed for duck hunting, and also active agricultural fields, can provide high-quality stopover habitat for migratory shorebirds. Groundwater is an increasingly valuable and limited resource in the MS Delta, so groundwater-neutral strategies for such wildlife habitat creation are needed. We will work with private landowners to provide high-quality, groundwater-neutral stopover habitat for migratory shorebirds in the MS Delta. Goal 1: Create 600 hectares of fall habitat for migrating shorebirds on private lands in the MS Delta, which has been estimated to be necessary to support the number of birds typically migrating through our region. Goal 2: Demonstrate the viability of ground-water neutral strategies for creating shorebird habitat, including use of surface water sources, lateral pumping, water storage, and drop-fill pumping strategies. Goal 3: Engage a diverse suite of private landowners and establish the desire for long-term voluntary implementation of these practices. Estimated Cost: $200,000 per year We have begun to build towards these goals by developing a network of partnerships with farmers and waterfowl enthusiasts throughout the Mississippi Delta, helping to assure the provision of substantial acreage of high-quality habitat for migratory shorebirds. During each of the fall 2016 and 2017 shorebird migrations, for example, we worked with landowners to create ap proximately 40 hectares (~100 acres) of habitat. Our on-the-ground surveys allowed us to estimate that this habitat was used each year by upwards of 10,000 migratory shorebirds, plus hundreds of wading birds, including herons, egrets, Wood Storks, and Roseate Spoonbills. In addition, we are currently pioneering a unique ground-water neutral strategy to create fall migratory shorebird habitat on a 67-acre crop field by pumping stored water from surface-water retention reservoirs, working with a corn farmer in Sunflower County, Mississippi. Our long-term goal is to assure that the entire 600-hectare target is met through provision of habitat via such partnerships with private landowners in the Mississippi Delta. July 11,2018		Yes	No	No	No	No	Yes	No		No		$ 200,000.00	$ 20,000.00	
	Research and Education	5815	8/10/2018	RESTORE Gulf-wide stream flow study Mississippi Component - add the Pearl River to the existing project.	There is an approved RESTORE Act-funded Gulf-wide river flow study that will use a Mississippi coastal plain stream as a study site. It is currently being planned by the USGS Gulf Water Science Center in Nashville, with Rodney Knight as the principal investigator. This study needs to either focus on the Pearl River or model both the Pearl and the Pascagoula rivers with the OASIS modeling program for regulated rivers. The following three questions have been posed for investigation using OASIS, a powerful modeling framework: 1) How far downstream can a dam's disruption to flow be detected? 2) How sensitive are the fresh water needs of the estuary to upstream damming? 3) Can the coastal waters be so distant from a dam's influence on the river that it can't be detected? With the current plans to add more low head dams/weirs and a new impoundment on the Pearl River in Jackson, Ms in the name of flood control, these three questions need to be answered for the Pearl before more structures are placed on it. If the best river scientists in the U.S. cannot answer these questions about the Pearl River, further damming is not justifiable. In a phone conversation with the USGS principal investigator, he said that there is no reason both rivers could not be investigated. The environmental data set on the Pascagoula may be a bit better than that of the Pearl, but beyond this and affordability under the budget, there isn't a reason that OASIS couldn't be developed and run for the Pearl River.It is basically a matter of hiring Hydrologics Inc. to develop the program and sponsor a team of USGS scientists to apply it. Given the importance of the Pearl River to downstream Parishes and Counties, to the seafood industry of two states, to NASA and the Navy river warfare teams that practice in the Pearl, this research is needed for the Pearl River.	Rankin, Hinds, Copiah, Simpson, Lawrence, Marion, Pearl River, Hancockt Tammany,Hancock	Yes	No	No	No	No	Yes	No		No		$ 3.00	$ -	
	Research and Education	5816	8/10/2018	Bottlenose Dolphin Health Assessments to Monitor Restoration Effectiveness in Mississippi	Health assessments are used to identify and understand population stressors, mitigate their effects, or plan more effective conservation measures, in response to management drivers (e.g., MMPA, ESA, NOAA's Ocean and Human Health initiative, and, more recently, for Natural Resource Damage Assessments â€“ NRDAs). Capture–release health assessments involve large teams of researchers using multiple vessels to locate, capture, assess, and release wild bottlenose dolphins. A large net is used to encircle one or more dolphins in shallow water. The team then enters the water and once the dolphin is disentangled from the net and restrained, blood is collected and vital signs are assessed. The dolphin is then brought up onto a specially designed platform on a boat for further examination and the collection of morphometrics, diagnostics, and biological samples. Samples are processed on the boat for timeliness and quality control purposes. Standard morphometrics and diagnostics include a physical exam, body measurements (length and girth), ultrasound to assess reproductive status and blubbler thickness, complete blood count (CBC)/blood chemistry/blood gases, serology, pathogens, endocrinology, immunology, urinalysis, skin and oral assessment, biotoxin and contaminant measures, and blowhole and genital swabs. Most of these diagnostics can only be obtained from wild dolphins through capture and brief restraint. Health assessments conducted on bottlenose dolphins in the Southeast have used standardized protocols and established laboratories for sample analysis. The pooling of available samples has resulted in the establishment of reference intervals for many health parameters, such as CBC, serum chemistry, mass:length ratio, and also baseline levels for biotoxins, persistent organic pollutants (POPs) including polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and a suite of organochlorine pesticides. Health assessments have been conducted on bottlenose dolphin populations in various locations in the Gulf, including Sarasota Bay, Florida (1987–present), Mississippi Sound, Mississippi (1982–83, 2013, 2018), Matagorda Bay, Texas (1992), St. Joseph Bay, Florida (2005–06), and Barataria Bay, Louisiana (2011, 2013, 2014, 2017, 2018). Health assessments conducted in Barataria Bay, Mississippi Sound, and Sarasota Bay were instrumental in quantifying injury associated with the Deepwater Horizon oil spill. There is a continued need for periodic health assessments of bottlenose dolphins in Barataria Bay, Mississippi Sound, and reference populations in Sarasota Bay to monitor the effectiveness of, and potential impacts from, restoration activities being conducted in Louisiana waters. The health assessments would follow the same protocols and procedures that have been developed and implemented previously in Gulf waters. The future vision is to obtain more information from remote sampling of bottlenose dolphins injured by the oil spill, including biopsy, breath, and tagging. This would minimize the need for capture–release health assessments because they represent higher risk to dolphins and to the team, and because of the difficult logistics and high costs. We also need coordinated data management, mapping, and spatial/temporal analysis to maximize the information gained from available samples.		Yes	No	No	No	No	Yes	No		No		$ -	$ -	

	Research and Education	5817	8/10/2018	Bottlenose Dolphin Photo-Identification Studies to Monitor Restoration Effectiveness in Mississippi	Photo-identification studies are a type of capture-mark-recapture study used to detect known (marked) and unknown individuals over time to estimate population size and vital rates. They are also used to provide information on distribution, seasonal movements, habitat use, behavior, and body condition and health of individuals. Information gained from multi-year photo-identification studies would be an indicator of the effectiveness of efforts to restore bottlenose dolphin populations in waters most heavily impacted by the Deepwater Horizon oil spill, including Barataria Bay, Mississippi Delta, Mississippi Sound, and adjacent coastal waters. Centralized large-scale, collaborative photo-identification catalogs for bottlenose dolphins and other species have been established (e.g., the Gulf of Mexico Dolphin Identification System, or GoMDIS), providing a basis for tracking movements of individual animals beyond project study sites and detecting range shifts in response to environmental changes. Existing data systems need to be assessed, refined, and expanded to facilitate upload and analysis of a large number images and to improve data access and sharing by a diverse group of field researchers and partner organizations in Mississippi and throughout the Gulf to better determine connectivity and movements of bottlenose dolphins within and between adjacent water bodies. Periodic workshops are needed to ensure standardized methods for image acquisition and processing are being used and revised as necessary. Multi-year studies need to be expanded to include additional study areas in Mississippi and across the Gulf, particularly coastal and offshore areas affected by the oil spill. Further research is needed on: (1) the development of software to enable more effective and timely analysis and comparison of still and video images, (2) the potential for high-resolution aerial imaging systems to augment or replace traditional aerial and/or vessel surveys, and (3) the use of unoccupied aircraft systems (UASs) or drones to collect images of marine mammals independently or during traditional vessel surveys or other surveillance operations. Budget is variable depending on the frequency of assessments and the duration of the project. Studies are most informative for assessing recovery of these long-lived species if conducted annually for a minimum of 10-15 years. Entities capable of conducting such studies, or that have successfully conducted such studies in other areas of the Gulf, include the the National Marine Fisheries Service Pascagoula Laboratory, the National Ocean Service Charleston Laboratory, academic institutions (e.g., the University of Houston, Eckerd College, University of Southern Mississippi, University of South Florida, University of Central Florida), and not-for-profit research organizations (e.g., Chicago Zoological Society/Mote Marine Laboratory, the Marine Mammal Foundation, and the Institute for Marine Mammal Studies in Gulfport, MS). Authors: This proposal was prepared by the Marine Mammal Commission, based on information compiled at the 2015 Gulf of Mexico Marine Mammal Research and Monitoring Meeting and subsequent meetings. The Marine Mammal Commission is not seeking funding for this project, nor does it anticipate receiving funds, if approved and adopted in whole or in part, by the Natural Resource Trustees, the Gulf states, the National Fish and Wildlife Foundation, the National Academy of Sciences, the Restoration Council, or any other funding entity. More information on GoMDIS can be obtained at: http://www.sarasotadolphin.org/introducing-gomdis-the-gulf-of-mexico-dolphin-identification-system/		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5818	8/10/2018	Trees Please Gulfport: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5820	8/10/2018	Lower Pascagoula Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the lower Pascagoula River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5821	8/10/2018	Addressing Harmful Human-Dolphin Interactions in Mississippi through Research, Education, and Enforcement	Nearshore and coastal habitats throughout the Gulf of Mexico are adjacent to areas of high human population. The high degree of overlap with human activities results in concern for both bottlenose dolphins that were also affected by the Deepwater Horizon oil spill. There are documented impacts on bottlenose dolphins from recreational fishing, boating, and tourism, including mortalities, injuries and harassment/disturbance. Harmful interactions between people and dolphins have been documented throughout the Gulf of Mexico, including in Mississippi coastal waters. Such interactions can be damaging to the dolphins by altering their natural behavior, and can put both humans and dolphins at risk of illness, injury, and death. The large variety of user groups and stakeholders and multiple management jurisdictions involved in such interactions requires a coordinated effort among state and federal biologists, managers, and enforcement agencies. Human activities of concern for bottlenose dolphins includeâ€" -Recreational fisheries - Interactions stem from entanglement in or ingestion of active or discarded fishing gear, depredation on bait or catch, scavenging of released fish, habitat degradation, and provisioning of animals. They can also stem from retaliation or lethal deterrence by fishermen for depredation on bait or catch. Acute and chronic impacts include altered behavior, decreased nutritional status, injury, and mortality. -Tourism and recreational activities - Interactions occur with recreational boaters, jet skis, dolphin and whale watching tour boats (particularly those operating irresponsibly by touching, feeding, swimming with, or harassing animals), and include boat strikes, disruption of natural behaviors, changes in group composition, association of people/boats with food if provisioning occurs, and conditioning. Long-term avoidance of high-use areas can lead to localized declines in abundance or shifts in habitat use to sub-optimal habitat. Acute and chronic impacts include altered behavior, decreased nutritional status and growth rate, injury, and mortality. Prevention of human-dolphin interactions is key, and is based on an understanding of how and why interactions occur. Targeted research on human attitudes towards dolphins coupled with long-term, year-round behavioral studies and data from stranded animals can help provide a more complete picture of causes of interactions, interaction rates, trends over time, and potential mitigation strategies. Studies conducted to data have identified mitigation strategies that have shown some effectiveness at preventing interactions. However, long-term effectiveness requires follow-up research on the effectiveness of mitigation, consistent and targeted public education and outreach efforts, and coordinated enforcement efforts in situations where education and outreach is not sufficient at curbing harmful interactions. Addressing harmful human-dolphin interactions in Mississippi state waters can aid directly in the restoration of bottlenose dolphins injured by the oil spill. Effort is needed in the following areas: -Characterizing the scope and nature of interactions as well as driving factors throughout Gulf; -Conducting surveys and interviews to understand the human dimensions of interactions and factors driving harmful human interactions with dolphins;		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5822	8/10/2018	Trees Please Biloxi: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, Biloxi Bay, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Harrison,Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5823	8/10/2018	Reducing Bycatch of Bottlenose Dolphins in Mississippi Commercial and Recreational Fisheries	Marine mammal bycatch refers to any marine mammal adversely affected as a result of being unintentionally entangled, entrapped, ensnared, or caught by nets, lines, traps, or hooks, or otherwise impacted by fishing gear. Bycatch is the greatest direct cause of marine mammal injury and death in the United States and around the world. Reducing marine mammal bycatch in Gulf of Mexico commercial and recreational fisheries is one of the strategies identified by the Natural Resource Damage Assessment Trustees to restore marine mammals injured as a result of the Deepwater Horizon oil spill. Marine mammals injured by the spill and/or response activities in the Gulf include bottlenose dolphins (all stocks), Atlantic spotted dolphins, Brydeâ€™s whales, pantropical spotted dolphins, pygmy sperm whales, Risso's dolphins, and short-finned pilot whales. Observer coverage to document and quantify fisheries interactions with marine mammals is limited, but based on best available information, the National Marine Fisheries Service (NMFS) has identified the following Gulf of Mexico fisheries as having frequent or occasional bycatch of marine mammals: shrimp trawl, menhaden purse seine, coastal gillnet, pelagic longline, trap/pot, and charter boat/headboat fisheries. There are also documented interactions between bottlenose dolphins and recreational hook-and-line fisheries. Reducing bycatch in commercial and recreational fisheries operating in and adjacent to Mississippi state waters can aid directly in the restoration of bottlenose dolphins and other marine mammal stocks injured by the oil spill. Effort is needed in the following areas: -Increased levels of observer coverage on the above-mentioned fisheries/gear types/target species (particularly the shrimp trawl and gillnet fisheries) to provide better estimates of marine mammals injured or killed incidental to commercial fishing activities. Expanded observer coverage would also provide additional information needed by managers to determine factors associated with bycatch, such as gear type, time of day, bait type, fishing methods, areas fished, etc., and to identify, test, and implement measures to reduce bycatch. -Research and field studies to identify and test alternative observation methods that could be used to supplement or replace traditional human observers. Such methods may include, but are not limited to, the use of: remote observation platforms, underwater cameras, electronic monitoring, and unoccupied aircraft sysytems (UASs). -The identification of measures that can be used to reduce bycatch of marine mammals while maintaining the economic viability of those fisheries. Measures to investigate and test could include, but are not limited to, alternative fishing gear and fishing methods, time-area restrictions, and removal of lost or derelict fishing gear (i.e., traps, pots, and gillnets). -The development of economic incentives for reducing marine mammal bycatch through, for example, incentive-based fishery bycatch measures. -Research on the ecological effects of fishing on marine mammals, their prey species, and the Gulf of Mexico marine ecosystem.		Yes	No	No	No	No	No	No		No		$ -	$ -	
	Research and Education	5824	8/10/2018	Trees Please Pascagoula: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, Pascagoula River, and the Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	

	Research and Education	5825	8/10/2018	Expand and Improve Marine Mammal Stranding Response and Monitoring Capabilities in Mississippi	This project requests sufficient long-term resources for the designated Marine Mammal Health and Stranding Response Program (MMHSRP) network member in Mississippi to monitor the effectiveness of restoration efforts through enhanced surveillance, response, investigation, and, where possible, recovery and rehabilitation of stranded marine mammals from populations in Mississippi nearshore and offshore waters that were directly impacted by the Deepwater Horizon (DWH) oil spill. Nearly every population of marine mammals that inhabits the nearshore and offshore waters of Mississippi suffered quantifiable injuries due to the Deepwater Horizon oil spill. Response to both live and dead stranded marine mammals and the collection of biological information from these animals is critical to obtaining an understanding of natural and human-caused factors that are either contributing to or impeding the restoration of DWH-impacted populations. The MMHSRP network member that has been designated by the National Marine Fisheries Service (NMFS) to conduct stranding response activities in Mississippi, in accordance with the requirements of the Marine Mammal Protection Act, is the Institute for Marine Mammal Studies (IMMS) in Gulfport, MS. IMMS has several highly-trained and experienced stranding responders on-staff, with access to technicians, veterinarians, pathologists, and other specialists as needed to provide effective medical and forensic response during and after a stranding event. Prior to the spill, stranding response efforts were patchy and inconsistent in many portions of the Gulf region. Response capabilities increased during the spill with funding from the Natural Resource Damage Assessment (NRDA) and IMMS was instrumental in ensuring timely response and collection of biological samples from animals in Mississippi and Alabama. However, long-term, consistent funding is needed in Mississippi and across the Gulf to monitor the effectiveness of NRDA-directed restoration efforts and to provide an ongoing assessment of injuries that may continue to be associated with oil spill response or restoration activities. Institutional funding is variable but generally inadequate to provide the level of response needed. Limited expertise throughout the Gulf in marine mammal response, investigation, forensics, veterinary care, and rehabilitation underscores the need to secure resources needed to retain and recruit properly trained specialists to ensure consistent stranding response capabilities. Stranding response complements on-water observational studies of free-swimming wild animals, which provide a means to measure population vitality, births, juvenile survival, visual health indicators, and incidences of injury or harassment by human activities (e.g., vessel strikes and fisheries interactions). The primary objectives of this project are to 1) increase surveillance efforts to identify stranded marine mammals, 2) ensure timely response to reports or sightings of live- and dead-stranded marine animals, 3) conduct timely and thorough examinations of live- and dead-stranded animals, and 4) collect, analyze, maintain, and disseminate consistent, standardized, high quality information from stranded animals and stranding events, in coordination with other marine mammal stranding network members across the Gulf. This project also would facilitate the integration of stranding data with other biological and environmental information to highlight and understand the connections between oceanography, ecosystem processes, and marine mammal health via the Marine Mammal Health Monitoring and Analysis Platform (HealthMAP, with a Gulf-specific GulfMAP in development). Additional benefits of this project are the ability to augment the resources and response capability across networks that serve other impacted marine wildlife species, such as sea turtles and sea birds. Cost Estimates: Approximately $10-15 million over 10-15 years*		Yes	No	No	No	No	Yes	No		No		$ 10.00	$ -	
	Research and Education	5826	8/10/2018	Middle Escatawpa Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Middle Escatawpa River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	Jackson,George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5827	8/10/2018	Upper Escatawpa Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Upper Escatawpa River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5828	8/10/2018	Hobolochitto Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Hobolochitto Creek watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	Pearl River	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5829	8/10/2018	Trees Please Bay St. Louis	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, St. Louis Bay, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Hancock,Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5830	8/10/2018	Bottlenose Dolphin Health Assessments to Monitor Restoration Effectiveness in Mississippi	Health assessments are used to identify and understand population stressors, mitigate their effects, or plan more effective conservation measures, in response to management drivers (e.g., MMPA, ESA, NOAA's Ocean and Human Health initiative, and, more recently, for Natural Resource Damage Assessments â€“ NRDAs). Capture-release health assessments involve large teams of researchers using multiple vessels to locate, capture, assess, and release wild bottlenose dolphins. A large net is used to encircle one or more dolphins in shallow water. The team then enters the water and once the dolphin is disentangled from the net and restrained, blood is collected and vital signs are assessed. The dolphin is then brought up onto a specially designed platform on a boat for further examination and the collection of morphometrics, diagnostics, and biological samples. Samples are processed on the boat for timeliness and quality control purposes. Standard morphometrics and diagnostics include a physical exam, body measurements (length and girth), ultrasound to assess reproductive status and blubbler thickness, complete blood count (CBC)/blood chemistry/blood gases, serology, pathogens, endocrinology, immunology, urinalysis, skin and oral assessment, biotoxin and contaminant measures, and blowhole and genital swabs. Most of these diagnostics can only be obtained from wild dolphins through capture and brief restraint. Health assessments conducted on bottlenose dolphins in the Southeast have used standardized protocols and established laboratories for sample analysis. The pooling of available samples has resulted in the establishment of reference intervals for many health parameters, such as CBC, serum chemistry, mass:length ratio, and also baseline levels for biotoxins, persistent organic pollutants (POPs) including polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and a suite of organochlorine pesticides. Health assessments have been conducted on bottlenose dolphin populations in various locations in the Gulf, including Sarasota Bay, Florida (1987â€“present), Mississippi Sound, Mississippi (1982â€“83, 2013, 2018), Matagorda Bay, Texas (1992), St. Joseph Bay, Florida (2005â€“06), and Barataria Bay, Louisiana (2011, 2013, 2014, 2017, 2018). Health assessments conducted in Barataria Bay, Mississippi Sound, and Sarasota Bay were instrumental in quantifying injury associated with the Deepwater Horizon oil spill. There is a continued need for periodic health assessments of bottlenose dolphins in Barataria Bay, Mississippi Sound, and reference populations in Sarasota Bay to monitor the effectiveness of, and potential impacts from, restoration activities being conducted in Louisiana waters. The health assessments would follow the same protocols and procedures that have been developed and implemented previously in Gulf waters. The future vision is to obtain more information from remote sampling of bottlenose dolphins injured by the oil spill, including biopsy, breath, and tagging. This would minimize the need for capture-release health assessments because they represent higher risk to dolphins and to the team, and because of the difficult logistics and high costs. We also need coordinated data management, mapping, and spatial/temporal analysis to maximize the information gained from available samples.		Yes	No	No	No	No	Yes	No		No		$ -	$ -	

	Research and Education	5832	8/10/2018	A comprehensive, participatory approach to enhance conservation of marine mammals and sea turtles and the sustainability of the shrimp fishery	Introduction: The shrimp fishery is the most valuable commercial fishery in the Gulf of Mexico with major cultural and economic impact on coastal communities. Several factors (e.g., fuel prices, shrimp imports, hurricanes, DWH spill) have impacted the viability of the shrimp fishery. Demand for sustainably produced seafood is increasing in the U.S. and greatly affects the market value of seafood. A common method to evaluate fisheries sustainability is the magnitude of the bycatch of marine mammals (MM) and sea turtles (ST) and efforts to avoid their bycatch. The shrimp fishery poses concerns for the conservation of MM/ST due to incidental capture (or bycatch) and reduction of MM/ST bycatch in this trawl fishery are restoration priorities (see PDARP/PEIS-Sections 5.5.10 and 5.5.11; Strategic Framework for MM and ST Restoration Activities). Regulations to limit bycatch in the shrimp fishery have long been in place (e.g. Turtle Excluder Devices or TEDs) and new measures continue to be proposed. However, limited observer coverage of the shrimp fishery (less than 1% of the fishing effort in the Gulf) and gaps in the data on the demographics and health of MM/ST populations (e.g., abundance, bycatch mortality, disease) complicates the evaluation of success of bycatch mitigation measures. These knowledge gaps and deficiencies impede the effective management of bycatch reduction of MM/ST populations in the shrimp fishery compromising the recovery of these protected species and the certification of this fishery as sustainable. This 5-year project proposes a group of activities that address knowledge gaps about the demographics of MMs and the health of STs, improve fishermenâ€™ awareness of the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) regulations pertaining to the shrimp fishery and provide new tools developed with input from stakeholders to evaluate the recovery potential of these populations under specific bycatch reduction scenarios. The use of the Management Strategy Evaluation (MSE) framework, widely used in managing fisheries and marine mammals, allows contrasting the benefits of different levels of survey effort and bycatch reduction measures to meet desired conservation and management objectives. This will be achieved through partnerships with all stakeholders (state & federal resource managers, fishing industry & communities, scientists, NGOs) and an interdisciplinary approach grounded in the principle that fishermen are active participants in the development of the management measures rather than mere â€œsubject-mattersâ€ïfto leverage effort and costs, this project would be conducted in Mississippi waters, where an ongoing project involving observers on shrimp vessels is underway to estimate MM/ST bycatch rates. However, the same approach would yield similar benefits in any other Gulf state, where the shrimp fishery is an important activity. The primary objectives of this project are: 1) To estimate annual abundance, trends in abundance, migration rates, and other key parameters for the MS Sound bottlenose dolphin population. These data are necessary to assess the impact of fisheries bycatch and other human-caused mortality and to evaluate the effects on this population from ongoing and planned restoration efforts in the MS Sound (e.g. water quality, enhancement of shellfish and fish habitat). 2) To characterize immunological responses of sea turtles against marine bacteria and compare these results to a baseline established in the southeastern United States to help understand the effects of natural and anthropogenic stressors on ST populations in the Gulf and to evaluate recovery efforts. 3) To improve awareness of MMPA and ESA requirements in the shrimp industry and community (fishermen, wholesalers, restaurant managers, etc.) to increase/promote compliance with regulations. 4) To collect data required for the certification of the shrimp fishery as sustainable, to support efforts to increase the market value of shrimp harvested by the MS fishery. Examples include correct use of TEDs, avoidance of areas/seasons with high MM/ST densities. 5) To develop MM/ST management tools to evaluate cost-benefits of survey effort and potential mitigation measures in the recovery of MM/ST populations for adaptive management of MM/ST		Yes	Yes	No	No	No	Yes	No		No		$ 16.00	$ -	
	Research and Education	5834	8/13/2018	Incentivized use of small bar spacing TEDs in the otter trawl fishery of Mississippi	NOAA Project ID# 13913 The aim of this project is to restore sea turtle populations in the Gulf of Mexico, particularly, Kempâ€™s ridleys (Lepidochelys kempii), where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer fishery in Mississippi. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through the incentivized use of smaller bar spacing TEDs, capable of excluding small juvenile sea turtles in the otter trawl fishery of Mississippi. In order to protect juvenile sea turtles that inhabit nearshore and inshore waters of the northern Gulf of Mexico, pending TED regulations for the skimmer trawl fishery will require TEDs with a maximum bar spacing of 3 inches, which is less than the current 4 inch maximum required for the otter trawl fishery. The skimmer trawl and inshore otter trawl fleet in Mississippi overlap operationally and likely encounter the same small turtles. This component of the project aims to incentivize the use of TEDs with 3 inch bar spacing in the otter trawl fishery in Mssissippi. Date: Aug 10, 2018	Harrison, Hancock and Jackson counties	Yes	No	No	No	No	Yes	No		No		$ 540,000.00	$ -	
	Research and Education	5835	8/13/2018	Enhancing the monitoring and enforcement of TEDs in coastal Mississippi	NOAA Project ID#13912: The aim of this project is to restore sea turtle populations in the Gulf of Mexico through enhancement of their protection in Mississippi coastal waters where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer fishery. Sea turtle restoration will be achieved through enhancing the activities of Mississippi marine enforcement directed toward TED compliance monitoring. Restoration will be achieved by maintaining TED compliance in Mississippi coastal waters at the highest level possible. Enhancement of monitoring and enforcement of TED regulations by Mississippi marine enforcement will be achieved through increased training of marine patrol officers in proper TED inspection procedures and through targeted funding for increased TED enforcement efforts at sea. Enforcement efforts will be tracked through submission of NOAA Fisheries TED inspection forms and TED compliance data uploads to the NOAA Fisheries TED compliance database. Date Aug 10, 2018	Harrison, Hancock and Jackson counties	Yes	No	No	No	No	Yes	No		No		$ 600,000.00	$ -	
	Research and Education	5836	8/13/2018	Industry outreach and education on specially designed TEDs for the Mississippi skimmer trawl fishery	NOAA Project ID# 13911: The aim of this project is to restore sea turtle populations in the Gulf of Mexico, particularly, Kempâ€™s ridleys (Lepidochelys kempii), where small juveniles overlap with the nearshore and inshore shrimp otter and skimmer trawl fisheries in Mississippi. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through enhanced outreach and training in turtle excluder device (TED) technology specifically for the skimmer trawl fishery which will be affected by a TED requirement in 2019. NOAA Fisheries anticipates the implementation of a TED use requirement for the southeast U.S. skimmer trawl fishery in 2019. Industry outreach and education on specially designed TEDs for the skimmer fishery will be crucial to successful implementation and compliance with federal regulations. Improving compliance will reduce potential lethal sea turtle interactions with skimmer trawls in Mississippi coastal waters. Workshops will focus on skimmer trawl TED performance results by TED configuration, installation of pre-constructed TEDs, TED handling techniques, and troubleshooting TED performance problems. Date: Aug 10, 2018	Harrison, Hancock and Jackson Counties	Yes	No	No	No	No	Yes	No		No		$ 50,000.00	$ -	
	Research and Education	5837	8/13/2018	Establishment of a TED outreach and training team for Mississippi	NOAA Project ID# 13910: The aim of this project is to restore sea turtle populations in the Gulf of Mexico through enhancement of their protection in Mississippi coastal waters where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer trawl fishery. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through the establishment of a core TED outreach team to provide enhanced outreach and training in Turtle Excluder Device (TED) technology to Mississippi shrimp fishers, through which TED compliance will be maintained at the highest level possible. A core TED outreach team consisting of a coordinator and a technical expert (TED specialist) will be established for the State of Mississippi. The team will provide outreach and training to Mississippi shrimp fishers on the latest advancements in TED technology and regulatory requirements. The team will work with Mississippi marine enforcement to provide training in the proper methods for inspecting TED compliance and will ensure that TED compliance information is recorded accurately for inclusion in a NOAA TED compliance database. The TED coordinator will receive training from and work closely with the NOAA Fisheries Gear Monitoring Team (GMT) to ensure that the most up to date information is provided to fishers and marine enforcement in Mississippi. Date Aug 10, 2018	Harrison, Hancock and Jackson	Yes	No	No	No	No	Yes	No		No		$ 656,000.00	$ -	
	Research and Education	5841	8/13/2018	Assessment of Artificial Lighting Impacts on Sea Turtles and Public Outreach on Mississippi Mainland Beaches	NOAA Project ID# 13906: Threatened and endangered sea turtles utilize the mainland beaches of Mississippi as nesting habitat. Artificial lights have been shown to reduce sea turtle nesting on otherwise suitable nesting beaches and cause disruption of the sea turtleâ€™s ability to find the sea. The first objective of this project is to conduct comprehensive nighttime lighting evaluations along the beaches of the Mississippi Gulf coastline, including Gulfport and Biloxi. The intent of the surveys is to evaluate all visible lights from the beach with respect to their potential effects on nesting and hatchling sea turtles. Lights that are illuminated and visible from the beach will be identified and evaluated (rated with respect to their potential effects on sea turtles). Based on a lightâ€™s intensity, location, distance from the beach, type of fixture and other relevant factors, recommendations will be made for corrective measures. Sub-meter accurate GPS units fitted with laser rangefinders along with digital SLR cameras will be used to precisely locate and photograph lights, enabling evaluation of their effects on sea turtles and the beach. Interactive maps will be produced showing the GPS location of each light source and the location on the beach from which they were observed. With these maps, property owners and managers will be able to click each location on the beach to bring up information about the light along with a photo of the light source. Recommendations for modifying each light to provide sufficient light for human safety and security while ensuring the light will not detrimentally affect sea turtles will be developed. We will meet with State, County, and City officials to discuss results of the comprehensive evaluation of existing lights and develop local Sea Turtle Protection Ordinances, which will include regulations addressing lighting and other activities affecting sea turtles on the beach. The second objective of the project is to provide educational outreach to patrons at beachfront casinos, resorts, and hotels. A presentation will be developed to provide the public with information on Mississippiâ€™s beach and dune ecosystem, its biota, and issues affecting the coastline. Additionally, a training program can be implemented to train City contractors to identify sea turtle crawls to avoid impacts during their normal operations (such as beach raking or concessions), as well as the appropriate organizations to contact for sea turtle and marine mammal strandings. Date: Aug 10, 218	Jackson, Harrison, and Hancock Counties	Yes	No	No	No	No	Yes	No		No		$ 175,000.00	$ -	
	Research and Education	5845	8/13/2018	Cat Island Visitor Access Facilities	NOAA Project ID#13894: Visitor access to the NPS part of Cat Island along the north shore is difficult. The water is very shallow and boaters have to anchor their boat offshore and walk in to the shoreline; this is both an inconvenience to visitors and injurious to the nearshore benthos (from boat hull and propeller scars and also footprints). Once onshore, there are no established trails or interpretive wayside exhibits. This project would: 1) construct a 600-ft-long pier adjacent to a previous WWII military pier site at Cat Island to provide vessel access to the north shore of the island (the pier is accessible by an old military road that connects to an interior road system maintained by the park service); 2) docking facilities at the end of the pier; 3) and a shade shelter/pavilion, waysides, regulatory signage and interpretative/educational panels interpreting the historic use of Cat Island as a military dog training camp. Date: Aug 8, 2018	Harrison County	Yes	No	No	No	No	No	Yes		No		$ 3,650,000.00	$ -	
	Research and Education	5846	8/13/2018	Mississippi-Jourdan/Wolf Watershed Restoration	NOAA Project ID#13900: The Deepwater Horizon oil spill caused direct, significant and long-term harm to the Gulf of Mexico, the Mississippi Sound and Mississippiâ€™s Bay of St. Louis. Following clean up from the oil spill, the long-term recovery and restoration of these waterbodies depends on the health of its bays and estuaries. The health of these bays and estuaries is directly influenced by quality and quantity of water from tributary rivers. Land use in those tributary watersheds directly impacts the quality and quantity of water these tributaries provide to the Mississippi Sound and the Gulf of Mexico. The Natural Resources Conservation Service recognized this inland/coastal linkage by including the Jourdan River in its Gulf of Mexico Initiative. Mississippiâ€™s Bay of St. Louis and its two tributaries the Jourdan and Wolf Rivers offers an ideal ecosystem for a tributary water quality and quantity restoration program. The area is large enough to measurably contribute to restoring and protecting water quality in Bay of St. Louis Bay, the Mississippi Sound and the Gulf of Mexico, yet a small enough to effectively monitor those benefits. The heath and expansion of the oyster population in the Bay will be the ultimate measure of the programs success. The program area blends urban, suburban, exurban and rural land uses that is fairly typical on the Gulf Coast. In addition to waterfront residential developments, cities on and near Bay of St. Louis have traditional working waterfronts that support various small shops, restaurants, marinas, commercial docks and industries vital to the local tax base and economy. The Mississippi Department of Marine Resources (DMR) Coastal Preserves Program has three (3) Gulf Ecological Management Sites (GEMS) in the Bayâ€™s estuaries; a) Jourdan River Preserve (6,423 acres), b) Bayou La Croix Preserve (1,478 acres) and c) Wolf River Preserve (2,462 acres). Part of the Hancock County Marsh GEM is also in the program area. DMR identified septic systems a s a major threat to the ecological function of each of these GEMS. Over time, many of the Bayâ€™s bayous and creeks became clogged with debris which traps sediments and may disrupt estuaries salinity levels and impair water quality. Finally, in 2015 The Nature Conservancy completed Watershed Management Plans in the program area: 1) Devils Swamp-Bayou La Croix, 2) Lower Bayou La Croix, 3) Phillips Bayou, 4) Magnolia Bayou, 5) Watts Bayou, and 6) Bear Point Bayou. Moving inland, land use changes to smaller communities and more agriculture. There is an emerging Upper Bay of St. Louis Watershed Partnership organizing management efforts in several watersheds in Hancock County that discharge into Bay of St. Louis. The Wolf River was Mississippiâ€™s first designated Scenic Stewardship Stream. The Wolf River Conservation Society, a non-profit organization created to conserve, manage and protect the Wolf River, has protected 2,950 acres in the Wolf River watershed. There is more residential development and agriculture in the Jourdan River watershed with documented failing septic systems and inadequate wastewater collection and treatment. The Pat Harrison Waterway District (PHWD) proposes to expand its successful cooperative approach with County and City governments to the Jourdan/Wolf River Basin. The PHWD proposes being a liaison between Council members to integrate priority County and City governments water quality and quantity restoration areas and activities into the Councilâ€™s plans. Date: Aug 8, 2018	Hancock, Harrison, Pearl River, Stone and Lamar Counties	Yes	No	No	No	No	Yes	No		No		$ 17,500,000.00	$ -	

	Research and Education	5847	8/13/2018	Reduction of Marine Mammal Fishery Interactions through Demonstration and Implementation of Better Techniques and Materials for Constructin Trawl Components.	NOAA Project ID# 13899: This project is designed to decrease interactions of marine mammals with commercial shrimp trawling gear. Dolphins are occasionally captured in shrimp trawls or entangled in the lazyline as a result of predation on gilled fish in the trawl, with hundreds of mortalities estimated per year in the Gulf of Mexico shrimp otter trawl fishery. Further, this predation results in extensive trawl damage, creating hours of work to repair the nets and these interactions have resulted in dolphins being injured or killed by fishers out of frustration. The majority of shrimp nets used in the GOM shrimp fishery are made from standard polyethylene webbing. In recent years, material such as Dyneema and Spectra have been introduced into the fishery but have yet to gain widespread use. NOAA Fisheries research suggests that these stronger materials sustain fewer dolphin bite holes compared to polyethylene nets. However, shrimp fishers are unlikely to make the investment to adopt these new net materials unless they know that comparable catch rates can be achieved. This project will compare and quantify target catch rates and dolphin bite damage between polyethylene netting (control) and stronger netting (experimental) aboard commercial trawlers rigged to pull two nets. Testing differing fishing configurations of the net such as comparison of trawl bib adjustments will also be evaluated. Additionally, the project will determine the optimal material and fishing configuration for trawl lazylines to reduce dolphin entanglement. A comparison of different lazyline materials will be conducted to determine if increasing line stiffness will decrease the likelihood of marine mammal entanglement. Drones, optical cameras, and acoustic cameras (DIDSON/ARIS) will be used to observe which materials have fewer dolphin interactions. This project will consist of five different objectives - - Compare the finfish bycatch and shrimp catch rates of Dyneema nets to identical nets made from polyethylene webbing. - Compare the amount of dolphin interactions, by counting number of dolphin bite holes for identical Dyneema and Polyethylene nets. - Compare dolphin interaction rates between lazylines made from differing materials using drones, optical cameras, and acoustic cameras. - Compare dolphin interaction rates between two bib-style trawls with different bib adjustments. - Outreach, distribution, and monetary incentives to fishers to use improved fishing gear. Once gear evaluations are complete the gear that demonstrates the least dolphin interactions will be promoted to the fishery. Improved lazylines or trawls will be given away to a limited number of fishers along with monetary incentives with the requirement of either observer coverage or reporting. Additionally, to ensure fishers are using the gear, NMFS GMT will conduct at sea monitoring of the gear. Once fishers become aware of the benefits of these materials, dolphin/fishermen conflicts should decline resulting in fewer dolphin mortalities in shrimp trawling gear. Additional outreach will conducted at workshops for upcoming TED regulations where these new materials will be promoted. Date Aug 8, 2018	Jackson, Harrison, Hancock	Yes	No	No	No	No	Yes	No		No		$ 800,000.00	$ -	
	Research and Education	5849	8/14/2018	Quantification of nutrient and sediment loads into the Mississippi Sound and Mobile Bay to inform oyster management	NOAA Project ID# 13895: This project will be a comprehensive study of historical and current streamflow, sediment, nutrients, and other pertinent water quality data and corresponding salinity, pathogen, and HAB responses to help inform oyster management in the Mississippi Sound and Mobile Bay. We intend to gather current and historical streamflow and water quality data (circa 1980) to : (1) quantify a surface water budget for freshwater entering these estuaries; (2) estimate trends in sediment and nutrient loads from point and nonpoint sources; (3) gather and analyze historical salinity data compared to historical trends in freshwater streamflow and any other trends related to climate change; and (4) relate trends in nutrient or other pertinent water quality loads to trends in historical pathogen, HAB, and oyster mortality responses. This project will leverage the existing Louisiana, Mississippi, Alabama Coastal Systems (LMACS) effort led by the Mississippi Department of Marine Resources. Date: Aug 7, 2018	Coastal counties in MS and AL	Yes	No	No	No	No	Yes	Yes		No		$ 1,500,000.00	$ -	
	Research and Education	5850	9/7/2018	BSL Downtown Amphitheater	The City of Bay Saint Louis would be an ideal location for an open-air amphitheater. The venue could be used for entertainment, musical performances, and local festivals. The amphitheater could also be utilized by city schools and local community organizations. An amphitheater in downtown Bay Saint Louis would be an asset and an economic benefit for the whole community.	Hancock	Yes	No	No	Yes	No	No	Yes		Yes		$ 2,000,000.00	$ -	
	Research and Education	5853	10/15/2018	Sunset Drive to Dunbar Ave Sanitary Sewer Improvements	Project consists of cleaning, videoing, addressing point repairs for damaged sewer main sections and lining of sewer main and manholes to prohibit bypass of sanitary sewer during heavy rain events. This section of sewer main is one of the oldest sections in the city and has continued to degrade over the years.	Hancock	Yes	No	No	No	No	No	Yes	100	Yes		$ 350,000.00	$ -	
	Research and Education	5854	10/15/2018	Lift Station Repair at Ramoneda St.	Project consists of pump station upgrades to include new pumps, internal wet well rehabilitation with new discharge pipes and valves, liner of wetwell and bypass valves installed near the valve box. This pump station is continually in a state of disrepair and undersized to handle existing demand. Also, during heavy rain falls the pumps are over worked causing periodic bypass of sanitary sewer into the nearby environment.	Hancock	Yes	No	No	Yes	No	Yes	Yes	100	Yes		$ 250,000.00	$ -	
	Research and Education	5855	10/25/2018	William Carey University College of Osteopathic Medicine at Tradition	William Carey University is a private, non-profit university with an in-depth history in the State of Mississippi, dating back to 1892. William Carey University (William Carey) provides quality educational programs, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society. William Carey currently has campus locations in Hattiesburg, MS, the Tradition Medical City in Tradition, MS and in Baton Rouge, LA. William Carey has a vast amount of educational offerings that can be found in the following colleges and schools: College of Health Sciences, College of Osteopathic Medicine at Hattiesburg Campus, School of Arts and Letters, School of Business, School of Education, School of Music and Ministry Studies, School of Natural and Behavioral Science, School of Nursing, and School of Pharmacy. William Careyâ€™s Tradition Campus, which opened in the fall of 2009, offers majors in art, business administration, elementary education, health related professions, nursing, and psychology. The University has recently reached a significant milestone with its School of Pharmacyâ€™s completed construction and its inaugural class of 57 students admittance this past July, with the capacity of 192 students and the creation of 34 new full-time equivalent jobs. The School of Pharmacy offers a three-year accelerated Doctor of Pharmacy program with an innovative curriculum that provides students with the knowledge and skillset required to excel as an entry-level practitioner. William Careyâ€™s School of Pharmacy is determined to make a difference in the lives of those who suffer from health issues such as diabetes, obesity, drug and tobacco addiction and asthma. In the spring of 2018, Southern Mississippi Planning and Development District commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern Mississippi to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippiâ€ Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development and serve as a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for the future growth of William Carey University and Tradition based around the success of other existing business and industry clusters at Lake Nona, Florida, and Research Triangle Park in North Carolina. Based on these findings, the continued growth of William Carey and Tradition will make the Mississippi Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the region and the state. As the first institution of higher learning to locate in the Tradition Medical City, William Carey has experienced enhanced opportunities to partner with industry-recognized collaborators and has exceeded their own expectations with their budding campus at Tradition. Such partnerships include Mississippi Gulf Coast Community Collegeâ€™s Bryant Center School of Nursing and Simulation Lab, Gulfportâ€™s Memorial Clinic at Tradition, and the National Diabetes and Obesity Research Institute (NDORI). Following the success of their School of Pharmacy, William Carey is planning to expand their medical offerings by opening an additional College of Osteopathic Medicine at the Tradition Campus. The development of the new College of Osteopathic Medicine at Tradition will allow for an enhanced partnership with NDORI and their efforts to reduce diabetes and obesity in the State of Mississippi. As found in the attached economic impact study, in 2016 over 371,622 Mississippians suffered from diabetes (over 15.4% of the state population). With nearly 1 in 6 Mississippians affected by diabetes,	Harrison	Yes	No	No	No	Yes	No	Yes	83	Yes		$ 60,000,000.00	$ -	
	Research and Education	5861	11/14/2018	Biloxi Career and Workforce Training	The Biloxi Career and Workforce Training (BCWT) program evolved from an economic security grant funded by W. K. Kellogg Foundation and awarded through East Biloxi Community Collaborative. We are requesting funding to continue the Biloxi Career and Workforce Training program which will include two sessions, Spring 2019 and Fall 2019 to Biloxi residents ages 18-50. Each participant must complete a Career Readiness course prior to advancing to Electrical and General Construction. The career readiness curriculum includes training specific to financial awareness, basic computer skills, resume writing, interviewing techniques and credit reporting. OMS Knights of Peter Claver, Council 25 provides a weekly electrical class which is held each Thursday for 10 weeks. The goal of the electrical training is to advance participants to Helper/Apprentice level. The electrical curriculum content is presented from NCCER Electrical: Level 1. Curriculum consists of: OSHA safety, construction math, blueprint reading, basic electrical training, wiring, identification of tools and materials, cost and material estimation and in-the-field training experience. Additionally, OMS Knights of Peter Claver, Council 25 provides a weekly general construction class. General construction training class is held each Saturday for 10 weeks. The goal of the general construction training is to advance participants to Helper/Apprentice level. The general construction curriculum content is presented from NCCER Core Curriculum: Introductory Craft Skills. The general construction curriculum consists of: OSHA safety, construction math, blueprint reading, basic construction skills, identification of tools and materials, cost and material estimation and classroom/in-the-field training experiences. Participants conclude the training by visiting worksites to practice job and environmental safety.	Harrison	Yes	No	No	No	Yes	No	No		Yes		$ 30,000.00	$ 3,500.00	
	Research and Education	5864	12/14/2018	Pearl River County Open Broadband Fiber Internet	Objectives - Pearl River County Open Broadband Fiber Internet is an exploration of the economics and methods of providing open access high-speed broadband fiberoptic internet access to all of the county. Open access provides the fiberoptic infrastructure while providing equal access to internet service providers to service their customers. Fiberoptic infrastructure installations are essentially infinitely wide thus only the electronics limit the speeds provided to the customers. There is little to no competition for affordable high-speed internet in the county if it is available at all. What is available is either low speed or unaffordable for the majority of the residents. Broadband is not an ordinary product. It is essential infrastructure â€“ the platform on which most commerce now depends. It has high start-up costs that take years to recover. When telecommunications prices are too expensive or speed too slow and unreliable, all businesses and residents suffer. Much like towns bypassed by canals, rails, or highways, future prospects are bleak for communities without adequate access to the Internet. Communities that do not invest in their own next-generation networks will likely not see any significant broadband investment in the near future. Benefits - Benefits include encouraging economic development, increasing access to education, and improving the quality of life. Many of the benefits are indirect, or spillover effects in economic terms. Lower prices for telecommunications services mean more money in household and business budgets, and new jobs and business expansions mean increased tax revenue for local governments. These benefits to the community result in no direct benefit to the network owner, which is why private companies like Spectrum and AT&T have less incentive to invest at this level. This projectâ€™s mission allows it to incorporate indirect benefits to the community when evaluating its return on investment. A private company evaluates its success in some respects based on the amount of money that flows from the host community to distant investors, a public network maximizes the money left in the community. Activities â€“ Grant funds will be used for forming a board of directors, consulting with the various advocacy organizations, obtaining legal advice, attending trade shows to evaluate vendors, providing accounting, and various ancillary expenses. Expected Outcomes â€“ The business plan will be the ultimate goal of this project. It will determine the budget, sources for funding, methods and routes for fiber installation, and organizational structure. The expectation is that the recent population increase will eventually be accelerated due to the economic benefits of attracting jobs due to the affordable high-speed internet availability.	Pearl River County	Yes	No	Yes	No	Yes	No	Yes		Yes	Since this	$ 500,000.00	$ -	
	Research and Education	5865	1/7/2019	Hickory Creek Headcut stabilization	Hickory Creek, along with White Cypress Creek and Catahoula Creek, make up the upper Jourdan River Watershed. They are all downcutting, each with a nick zone that migrates upstream. The one on Hickory Creek, a half mile downstream of Caesar Necaise Road, will threaten the bridge and roadway in the not too distant future. The headcut is contained within the applicantâ€™s property. Hickory Creek, in its un-degraded state, is a sinous coastal stream that is fairly small in appearance. However, it drains a large watershed upstream of the headcut, some 35 square miles. It utilizes its floodplain to accommodate the high water flows that result from heavy rainfall events. On these occasions, the stream and the floodplain together operate as one wide, forested stream. Below the nick zone, the stream is downcut enough that it loses the ability to put floodwater out onto the floodplain. When this happens, the water blows out the banks to accommodate the flow. The resulting soil and vegetation loss is staggering. The soil loss is a large contributor to the siltation problem in Bay St. Louis. Downstream of the nick zone, at some point the stream achieves a new form of stability within its canyon. Between these two areas, a length of, say, Ã¼ of a mile, is a constantly moving zone of destruction. The project is to stop the upstream migration of that zone and stabilize it. It will involve creating grade control structures, probably three or so to step the stream down in an orderly fashion. It will also involve woody debris removal and some bank sloping and stabilization. Incidentally all tributaries that enter the downcut streams have to downcut as well to reach grade. There are two main tributaries and one smaller one on the applicant's property that should receive similar treatment, although on a smaller scale.	Hancock	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	5866	1/14/2019	Manatee Rescue and Rehabilitiaton Center in Mississippi	Although the West Indian manatee (Trichechus manatus) has historically ranged throughout the southeastern United States, its recovering population has resulted in an increased number of animals traveling throughout the coastal waterways of Alabama, Mississippi, and Louisiana. Still, this is a vulnerable species requiring continued monitoring as well as rescue and rehabilitation services. Unfortunately, there are no facilities equipped to conduct rescue and rehabilitation efforts in Alabama, Mississippi, or Louisiana. Instead, these states must rely on assistance from facilities and personnel from other states to execute both the rescue and rehabilitation of these animals. The Institute for Marine Mammal Studies is strategically located in coastal Mississippi and has a long and established history in marine mammal and sea turtle stranding response and rehabilitation. IMMS has been involved in the rescue, rehabilitation, and release of marine mammals and sea turtles since 1984, and IMMSâ€™ staff and veterinarians have the necessary experience, facilities, and capabilities to conduct rescues and rehabilitation activities within this region as well as coordinating with both state and federal agencies.	Harrison, Jackson, Hancock	Yes	No	No	No	No	Yes	Yes	10	No	Rescue an	$ 5,000,000.00	$ -	

	Research and Education	5870	2/11/2019	Gigabit Gulf Coast and High-Tech Workforce	Mississippi Gulf Coast Community College proposes the Gigabit Gulf Coast and High-Tech Workforce project which will include the deployment, physical installation and connection of a Gigabit Gulf Coast fiber infrastructure tailor-made to meet the Coastâ€™s unique needs and requirements. In addition, MGCCC proposes to construct a Center of Excellence for Advanced Technology and offer high-tech workforce training to include Cybersecurity, Coding, Artificial Intelligence, and Virtual Reality. Mississippi Gulf Coast Community College (MGCCC) can play a unique role in helping to unify the disparate entities on the coast to accomplish these tasks. The broadband infrastructure of Mississippi has largely been in the hands of giant businesses with agendas that may not align with the interests of businesses, governments, or citizens of the Gulf Coast. In 2019, the Mississippi Broadband Enabling Act was signed into law, which allows electric power cooperatives across the state to offer high-speed internet service to its customers. Once a core cyber ring is in place, this law would allow the electric power cooperatives to take high-speed Internet service to the rural areas through the Gulf Coast region. By quickly building a future-proof pure fiber network, a Gigabit Gulf Coast can control and transform its digital future. It would establish timely, redundant, universal and affordable ultra-high speed internet connectivity. Local governments, businesses, and citizens together will spark innovation and draw new investments, develop new approaches to familiar services such as transport, education, health, utilities, and entertainment, and jump-start new ways of doing business that can take full advantage of an increasingly virtualized global economy. A vibrant fiber infrastructure will introduce a new set of challenges for everyone in the Gulf Coast region. It would be myopic to create a Gigabit Gulf Coast without training the workforce alongside this advancement to encourage innovation and protect businesses, organizations, and citizens. Objective 1: The physical installation of the fiber and connection of the key sites. This activity will proceed in as little as one or two years with new deployment technology. Activities will include first connecting public sectors, educational entities, and commercial sites with the most urgent and intensive demand. The next step will connect businesses, data centers, innovation hubs, and industrial parks that rely on data for their commercial existence. Ultimately, the pure fiber network will function as a backbone for deployment to individual homes, providing residential access to ever-richer forms of digital services and entertainment. Service providers will begin offering services over the new network and bring new applications, features, content, and services to run over the near-infinite capacity provided by the pure fiber technology. Speeds will reach least a 100 gigabit-per-second-internet connection across the Coast. Objective 2: A Center of Excellence for Advanced Technology will be located on the Jefferson Davis Campus which will house cutting edge high-tech training programs and be tied to a world-class facility to experiment with technology and offer online programs to students around the globe. Activities will include the construction of the center, equipping the center with high-tech instructional equipment and hiring of instructors. Objective 3: Four programs will be developed and implemented to include Cybersecurity, Coding, Artificial Intelligence and Virtual Reality/Augmented Reality. Descriptions of these programs follow.	Harrison	Yes	No	No	No	Yes	No	Yes	15	Yes		$ 26,000,000.00	$ -	
	Research and Education	5873	2/20/2019	Wolf River Weyerhaeuser Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society which is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippiâ€™s first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land owned by the Weyerhaeuser Company totaling Â~39,028 acres, located in areas identified as crucial to establishing complete corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would continue conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County that totals approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. Ecological Value: -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as kayaking, birdwatching, fishing, and other wildlife observation - Adds to complete corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	
	Research and Education	5874	2/21/2019	MSU Northern Gulf Aquatic Food Research Center	Despite Mississippiâ€™s relatively short coastline, the Mississippi Gulf Coast produces an abundance of natural resources and economic impact. Coastal Mississippi was once renowned as â€œthe seafood capital of the world.â€ However, today approximately 90% of the fish consumed in the United States are imported. The entire Gulf Coast produces 70 percent of the nationâ€™s oysters, 69 percent of domestic shrimp and is a leading producer of domestic hard and soft-shell blue crabs. In 2014, the Mississippi seafood industry generated total economic impacts of $199 million and created 4700 jobs. As a component of this industry-wide impact, the Mississippi seafood processing industry annually produces approximately $100 million in economic impacts and supports approximately 1000 jobs in coastal counties. Gulf seafood contains many of the nutritional and taste qualities desired by consumers, including high-quality protein and vitamins, low calories and saturated fats, and high omega-3 fatty acids. Consumers have responded to these qualities by increasing seafood consumption, as reflected by a nearly 3-fold increase U.S. per capita consumption of shrimp over the past 25 years. Yet safety and quality of seafood products remain an important public health and economic issue as illustrated by water quality related beach closures and consumption restrictions associated with the Deep-Water Horizon oil spill, in addition to the oil spill, Hurricane Katrina and the opening of the Bonnet CarrÃ© Spillway have contributed to the dramatic decrease in oyster production. The Mississippi Governorâ€™s Oyster Restoration and Resiliency Council made a determination in 2015 to restore oyster reefs to promote oyster aquaculture and set a goal of 1 million sacks of annual oyster production by 2025. The increased focus on oyster restoration and aquaculture production in MS will greatly enhance the state economy. However, outbreaks of food-borne pathogens in raw oysters have produced a negative impact on oyster marketing. To successfully restore production and marketing of oysters and other seafood, research ensuring food safety and value-added utilization is needed. Additionally, catfish is the most important aquaculture product in the United States with a total production of about $400 million per year, concentrated in the mid-south coastal states. Mississippi leads in catfish production with a farm gate value of approximately $200 million. Eleven catfish fillet processing industries, with 7 in Mississippi, 2 in Alabama and 2 in Louisiana add value to catfish products. The total economic impact of the catfish processing industries is approximately $1 billion. However, to compete with imported catfish products, the USDA-ARS Research Unit in Stoneville in conjunction with the catfish processing industries have identified badly needed research areas to recover more meat, extend shelf-life and better utilize its by-products. The northern Gulf of Mexico region lacks a strong, modern seafood research center. Mississippi State Universityâ€™s Coastal Research and Extension Center supports a team of scientists and specialists at the Pascagoula Seafood Processing Laboratory that provides services to the stateâ€™s seafood industry. However, the space and facilities have become inadequate to fulfill the increasing needs of the industries. The proposed development will establish a robust, state of the art base for conducting aquatic food research and product innovations. In addition to industry partners, the interest of a multitude of state and federal agencies (USDA-ARS, NOAA, FDA, MSDEQ, USM, and MDMR) on the gulf coast creates a rich opportunity for collaboration and synergism to promote the fish and seafood industries not only in Mississippi but also in the entire northern gulf. In addition to advancing science and technology to promote the utilization of seafoods and catfish, the Aquatic Food Research Center will serve as the base to build a strong value-added food processing cluster to promote the economy in the state and the region. To accomplish this goal, a permanent structured building of approximately 19,500 sq ft with components of the space and laboratory capacities, and examples of functions are outlined tentatively as below.	Harrison	Yes	Yes	No	No	No	No	Yes	100	Yes		$ 15,700,000.00	$ 500,000.00	
	Research and Education	5875	2/22/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune, Mississippi and, 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed (LEED) Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershedâ€™s habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. These indoor exhibits, along with the restored outdoor exhibits and trails of the Crosby Arboretum, will provide for a dynamic and unforgettable visitor experience. Additionally, the Environmental Education Centerâ€™s training classrooms and conference rooms (including distance learning capabilities) will allow for teaching of audiences of all ages and for a greater impact and reach of educational programs and events currently offered at the Crosby Arboretum, which in 2017 included 44 programs and events benefiting 2,828 participants. The potential tourism and educational impact of the Environmental Education Center can leverage on the fact that the Crosby Arboretum is part of Mississippi State University, which provides access to specialized faculty and an abundance of educational resources for educational programming addressing coastal region issues such as environmental resiliency, habitat restoration and conservation, ecotourism and heritage tourism promotion and marketing, to name only a few. These educational events are offered to not only the public but also to K-12 students, garden and naturalist clubs, among others. The Crosby Arboretum is also home to a Mississippi landmark structure, the Pinecote Pavilion, designed by renowned architect E. Fay Jones, a student of Frank Lloyd Wright (Figure 2). This pavilion draws tourists from around the world and will continue to play a key role in the environmental and cultural education/stewardship programs of Crosby Arboretum. The Environmental Education Center will include a gift shop featuring nature-themed items and a Pinecote Art Gallery that will display the work of selected regional artists throughout the year. In addition, to support the research function of Crosby Arboretum and Lower Pearl River Watershed Environmental Education Center, dormitories will be constructed to house interns and student researchers who are visiting the facility to learn and conduct research. In order to support increased tourism access and opportunities for tourism expansion in Pearl River County, a partnership is being proposed between the adjacent I-59 Mississippi Welcome Center and the Crosby Arboretum. This project also proposes the construction of a road and/or walking path from the I-59 Mississippi Welcome Center and a parking area accessible only from the I-59 Mississippi Welcome Center to support the increase in visitation to the Environmental Education Center and Crosby Arboretum that will result from the connection between the I-59 Mississippi Welcome Center and the Arboretum. The proposal also requests funding to cover the expanded operation of the Crosby Arboretum and the proposed Environmental Education Center for ten years thus allowing access without a fee and increasing tourism. Additionally, an interpretive kiosk will be constructed in or adjacent to the Welcome Center to direct the tourists to the Education Center and other parts of Picayune and Pearl River County. This partnership with an interstate welcome center is nothing new. It is similar to the connection between the Infinity Science Center with the I-10 Mississippi Welcome Center in Hancock County and the partnership between the I-10 Welcome Center and the Mississippi Sandhill Crane/Grand Bay National Wildlife Refugeâ€™s Nature Trail. Native Plant Restoration: Since opening in 1986, the Crosby Arboretum has been called the PREMIER NATIVE PLANT CONSERVATORY in the Southeast, and has been the recipient of numerous top	Pearl River	Yes	No	No	Yes	No	No	Yes	100	Yes		$ 9,700,000.00	$ -	
	Research and Education	5873	2/20/2019	Wolf River Weyerhaeuser Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society which is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippi's first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land owned by the Weyerhaeuser Company totaling Â~39,028 acres, located in areas identified as crucial to establishing complete corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would continue conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County that totals approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. Ecological Value: -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as kayaking, birdwatching, fishing, and other wildlife observation - Adds to complete corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	Land Acquisition

	Research and Education	5874	2/21/2019	MSU Northern Gulf Aquatic Food Research Center	Despite Mississippi's relatively short coastline, the Mississippi Gulf Coast produces an abundance of natural resources and economic impact. Coastal Mississippi was once renowned as â€œthe seafood capital of the world.â€ However, today approximately 90% of the fish consumed in the United States are imported. The entire Gulf Coast produces 70 percent of the nation's oysters, 69 percent of domestic shrimp and is a leading producer of domestic hard and soft-shell blue crabs. In 2014, the Mississippi seafood industry generated total economic impacts of $199 million and created 4700 jobs. As a component of this industry-wide impact, the Mississippi seafood processing industry annually produces approximately $100 million in economic impacts and supports approximately 1000 jobs in coastal counties. Gulf seafood contains many of the nutritional and taste qualities desired by consumers, including high-quality protein and vitamins, low calories and saturated fats, and high omega-3 fatty acids. Consumers have responded to these qualities by increasing seafood consumption, as reflected by a nearly 3-fold increase U.S. per capita consumption of shrimp over the past 25 years. Yet safety and quality of seafood products remain an important public health and economic issue as illustrated by water quality related beach closures and consumption restrictions associated with the Deep-Water Horizon oil spill. In addition to the oil spill, Hurricane Katrina and the opening of the Bonnet CarrÃ© Spillway have contributed to the dramatic decrease in oyster production. The Mississippi Governor's Oyster Restoration and Resiliency Council made a determination in 2015 to restore oyster reefs to promote oyster aquaculture and set a goal of 1 million sacks of annual oyster production by 2025. The increased focus on oyster restoration and aquaculture production in MS will greatly enhance the state economy. However, outbreaks of food-borne pathogens in raw oysters have produced a negative impact on oyster marketing. To successfully restore production and marketing of oysters and other seafood, research ensuring food safety and value-added utilization is needed. Additionally, catfish is the most important aquaculture product in the United States with a total production of about $400 million per year, concentrated in the mid-south coastal states. Mississippi leads in catfish production with a farm gate value of approximately $200 million. Eleven catfish fillet processing industries, with 7 in Mississippi, 2 in Alabama and 2 in Louisiana add value to catfish products. The total economic impact of the catfish processing industries is approximately $1 billion. However, to compete with imported catfish products, the USDA-ARS Research Unit in Stoneville in conjunction with the catfish processing industries have identified badly needed research areas to recover more meat, extend shelf-life and better utilize its by-products. The northern Gulf of Mexico region lacks a strong, modern seafood research center. Mississippi State University's Coastal Research and Extension Center supports a team of scientists and specialists at the Pascagoula Seafood Processing Laboratory that provides services to the state's seafood industry. However, the space and facilities have become inadequate to fulfill the increasing needs of the industries. The proposed development will establish a robust, state of the art base for conducting aquatic food research and product innovations. In addition to industry partners, the interest of a multitude of state and federal agencies (USDA-ARS, NOAA, FDA, MSDEQ, USM, and MDMR) on the gulf coast creates a rich opportunity for collaboration and synergism to promote the fish and seafood industries not only in Mississippi but also in the entire northern gulf. In addition to advancing science and technology to promote the utilization of seafoods and catfish, the Aquatic Food Research Center will serve as the base to build a strong value-added food processing cluster to promote the economy in the state and the region. To accomplish this goal, a permanent structured building of approximately 19,500 sq ft with components of the space and laboratory capacities, and examples of functions are outlined tentatively as below.	Harrison	Yes	Yes	No	No	No	No	Yes	100%	Yes		$ 15,700,000.00	$ 500,000.00	
	Research and Education	5875	2/22/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune, Mississippi and, 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed (LEED) Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershed's habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. 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The Environmental Education Center will include a gift shop featuring nature-themed items and a Pinecote Art Gallery that will display the work of selected regional artists throughout the year. In addition, to support the research function of Crosby Arboretum and Lower Pearl River Watershed Environmental Education Center, dormitories will be constructed to house interns and student researchers who are visiting the facility to learn and conduct research. In order to support increased tourism access and opportunities for tourism expansion in Pearl River County, a partnership is being proposed between the adjacent I-59 Mississippi Welcome Center and the Crosby Arboretum. This project also proposes the construction of a road and/or walking path from the I-59 Mississippi Welcome Center and a parking area accessible only from the I-59 Mississippi Welcome Center to support the increase in visitation to the Environmental Education Center and Crosby Arboretum that will result from the connection between the I-59 Mississippi Welcome Center and the Arboretum. The proposal also requests funding to cover the expanded operation of the Crosby Arboretum and the proposed Environmental Education Center for ten years thus allowing access without a fee and increasing tourism. Additionally, an interpretive kiosk will be constructed in or adjacent to the Welcome Center to direct the tourists to the Education Center and other parts of Picayune and Pearl River County. This partnership with an interstate welcome center is nothing new. It is similar to the connection between the Infinity Science Center with the I-10 Mississippi Welcome Center in Hancock County and the partnership between the I-10 Welcome Center and the Mississippi Sandhill Crane/Grand Bay National Wildlife Refuge's Nature Trail. Native Plant Restoration: Since opening in 1986, the Crosby Arboretum has been called the PREMIER NATIVE PLANT CONSERVATORY in the Southeast, and has been the recipient of numerous top	Pearl River	Yes	No	No	Yes	No	No	Yes	100%	Yes		$ 9,700,000.00	$ -	
	Research and Education	5876	3/4/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: - Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; - On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; - Delivery of medical supplies and support to areas that are inaccessible to first responders; - Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and - Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison, Washington,Orleans,Perry,Forrest, Pearl River,Jackson,St Tammany,Stone, Hancock,Mobile	Yes	Yes	Yes	Yes	Yes	Yes	Yes	72%	Yes		$ 3,250,000.00	$ -	
	Research and Education	5877	3/14/2019	Coastal Environment Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society (WRCS). WRCS is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf River as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippi's first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land totaling Ã~428.5 acres, located in areas identified as crucial to connecting continuing corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would expand conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County which total approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. These properties are all tidally influenced, and consist of both estuarine marsh and bottom land hardwood habitats. Ecological Value: -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Establishes a protected nursery ecosystem for marine life. -Opportunities for low impact recreational activities such as kayaking, bird watching, fishing, and other wildlife observation -Extends and connects corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	Land Acquisition
New	Research and Education	5874	4/4/2019	MSU Northern Gulf Aquatic Food Research Center	Despite Mississippi's relatively short coastline, the Mississippi Gulf Coast produces an abundance of natural resources and economic impact. Coastal Mississippi was once renowned as the seafood capital of the world. However, today approximately 90% of the fish consumed in the United States are imported. The entire Gulf Coast produces 70 percent of the nation's oysters, 69 percent of domestic shrimp and is a leading producer of domestic hard and soft-shell blue crabs. In 2014, the Mississippi seafood industry generated total economic impacts of $199 million and created 4700 jobs. As a component of this industry-wide impact, the Mississippi seafood processing industry annually produces approximately $100 million in economic impacts and supports approximately 1000 jobs in coastal counties. Gulf seafood contains many of the nutritional and taste qualities desired by consumers, including high-quality protein and vitamins, low calories and saturated fats, and high omega-3 fatty acids. Consumers have responded to these qualities by increasing seafood consumption, as reflected by a nearly 3-fold increase U.S. per capita consumption of shrimp over the past 25 years. Yet safety and quality of seafood products remain an important public health and economic issue as illustrated by water quality related beach closures and consumption restrictions associated with the Deep-Water Horizon oil spill. In addition to the oil spill, Hurricane Katrina and the opening of the Bonnet CarrÃ© Spillway have contributed to the dramatic decrease in oyster production. The Mississippi Governor's Oyster Restoration and Resiliency Council made a determination in 2015 to restore oyster reefs to promote oyster aquaculture and set a goal of 1 million sacks of annual oyster production by 2025. The increased focus on oyster restoration and aquaculture production in MS will greatly enhance the state economy. However, outbreaks of food-borne pathogens in raw oysters have produced a negative impact on oyster marketing. To successfully restore production and marketing of oysters and other seafood, research ensuring food safety and value-added utilization is needed. Additionally, catfish is the most important aquaculture product in the United States with a total production of about $400 million per year, concentrated in the mid-south coastal states. Mississippi leads in catfish production with a farm gate value of approximately $200 million. Eleven catfish fillet processing industries, with 7 in Mississippi, 2 in Alabama and 2 in Louisiana add value to catfish products. The total economic impact of the catfish processing industries is approximately $1 billion. However, to compete with imported catfish products, the USDA-ARS Research Unit in Stoneville in conjunction with the catfish processing industries have identified badly needed research areas to recover more meat, extend shelf-life and better utilize its by-products. The northern Gulf of Mexico region lacks a strong, modern seafood research center. Mississippi State University's Coastal Research and Extension Center supports a team of scientists and specialists at the Pascagoula Seafood Processing Laboratory that provides services to the state's seafood industry. However, the space and facilities have become inadequate to fulfill the increasing needs of the industries. The proposed development will establish a robust, state of the art base for conducting aquatic food research and product innovations. In addition to industry partners, the interest of a multitude of state and federal agencies (USDA-ARS, NOAA, FDA, MSDEQ, USM, and MDMR) on the gulf coast creates a rich opportunity for collaboration and synergism to promote the fish and seafood industries not only in Mississippi but also in the entire northern gulf. In addition to advancing science and technology to promote the utilization of seafoods and catfish, the Aquatic Food Research Center will serve as the base to build a strong value-added food processing cluster to promote the economy in the state and the region. To accomplish this goal, a permanent structured building of approximately 19,500 sq ft with components of the space and laboratory capacities, and examples of functions are outlined tentatively as below.	Harrison	Yes	Yes	No	No	No	No	Yes	100	Yes		$ 15,700,000.00	$ 500,000.00	

New	Research and Education	5875	4/8/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	The Lower Pearl River Watershed Environmental Education Center and Completing the Unbuilt Arboretum Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education Center at the Crosby Arboretum in Picayune, Mississippi following the designs of E. Fay Jones, and 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershed's habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. These indoor exhibits, along with the restored outdoor exhibits and trails of the Crosby Arboretum, will provide for a dynamic and unforgettable visitor experience. Additionally, the Environmental Education Center's training classrooms and conference rooms (including distance learning capabilities) will allow for teaching of audiences of all ages and for a greater impact and reach of educational programs and events currently offered at the Crosby Arboretum, which in 2017 included 44 programs and events benefiting 2,828 participants. The potential tourism and educational impact of the Environmental Education Center can leverage on the fact that the Crosby Arboretum is part of Mississippi State University, which provides access to specialized faculty and an abundance of educational resources for educational programming addressing coastal region issues such as environmental resiliency, habitat restoration and conservation, ecotourism and heritage tourism promotion and marketing, to name only a few. These educational events are offered to not only the public but also to K-12 students, garden and naturalist clubs, among others. The Crosby Arboretum is also home to a Mississippi landmark structure, the Pinecote Pavilion, designed by renowned architect E. Fay Jones, a student of Frank Lloyd Wright (Figure 2). This pavilion draws tourists from around the world and will continue to play a key role in the environmental and cultural education/stewardship programs of Crosby Arboretum. The Environmental Education Center will include a gift shop featuring nature-themed items and a Pinecote Art Gallery that will display the work of selected regional artists throughout the year. In addition, to support the research function of Crosby Arboretum and Lower Pearl River Watershed Environmental Education Center, dormitories will be constructed to house interns and student researchers who are visiting the facility to learn and conduct research. In order to support increased tourism access and opportunities for tourism expansion in Pearl River County, a partnership is being proposed between the adjacent I-59 Mississippi Welcome Center and the Crosby Arboretum. This project also proposes the construction of a road and walking path from the I-59 Mississippi Welcome Center and a parking area accessible only from the I-59 Mississippi Welcome Center to support the increase in visitation to the Environmental Education Center and Crosby Arboretum that will result from the connection between the I-59 Mississippi Welcome Center and the Arboretum. The proposal also requests funding to cover the expanded operation of the Crosby Arboretum and the proposed Environmental Education Center for ten years thus allowing access without a fee and increasing tourism. Additionally, an interpretive kiosk will be constructed in or adjacent to the Welcome Center to direct the tourists to the Education Center and other parts of Picayune and Pearl River County. This partnership with an interstate welcome center is nothing new. It is similar to the connection between the Infinity Science Center with the I-10 Mississippi	Pearl River	Yes	No	No	Yes	No	No	Yes	100	Yes		$ 9,700,000.00	$ -	
New	Research and Education	5876	4/16/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: • Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; • On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; • Delivery of medical supplies and support to areas that are inaccessible to first responders; • Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and • Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison, Washington,Orleans,Perry,Forrest, Pearl River,Jackson,St Tammany,Stone, Hancock,Mobile	Yes	Yes	Yes	Yes	Yes	No	Yes	72	Yes		$ 3,250,000.00	$ -	
New	Research and Education	5877	4/16/2019	Coastal Environment Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society (WRCS). WRCS is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf River as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippi's first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land totaling Ã¬428.5 acres, located in areas identified as crucial to connecting continuing corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would expand conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County which total approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. These properties are all tidally influenced, and consist of both estuarine marsh and bottom land hardwood habitats. Ecological Value: •Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. •Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. •Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. •Establishes a protected nursery ecosystem for marine life. •Opportunities for low impact recreational activities such as kayaking, bird watching, fishing, and other wildlife observation •Extends and connects corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	Land Acquisition
New	Research and Education	5878	4/17/2019	Biloxi Upstream and Downstream Storm Water Education and Community-Engaged Green Infrastructure	The people that live, work and visit the Biloxi peninsula are all within a few hundred yards of the Biloxi Back Bay or the Mississippi Sound and their actions have immediate impacts on the environment because all the stormwater runs into marine water either directly or by way of one of several bayous leading to the Back Bay. In the past few years most of the streets and the storm drainage systems on the peninsula have been or are being replaced, a situation that is positive as far as moving stormwater out of streets but will increase the stormwater impact on the bayous and back bay with more and faster moving storm water. What is more, the construction work itself has impacted the natural waterways due to increased silt running into the bayous from unpaved roads. The time for the Biloxi peninsula is right for a comprehensive community-engaged stormwater management campaign that improves and creates both upstream and downstream green infrastructure. Upstream, the project will improve the quality and quantity of water that enters the storm drainage system with four related activities: 1.Environmental education with Biloxi Public School students 2.Stormwater education to residents of the Biloxi peninsula 3.Low-impact development training and design resources for developers and city staff 4.A property owners small-grant program to do on-site and neighborhood-scale green infrastructure projects. Downstream, the project will improve the stormwater quality and quantity that enters the marine environment with two related activities: 1.Restoration and improvements of natural waterways that connect storm drainage to the Back Bay, especially Keegan Bayou and Bayou Auguste, which have been impacted most by the road construction work. 2.Coordination and leveraging of on-going and planned projects to bring green infrastructure planning and funds to install and maintain landscape areas Environmental education with Biloxi Public School students. For the past seven years GCCDS has developed and implemented educational outreach programs with Biloxi Junior High School, East Hancock Elementary, St. Martin High School, and with middle school students in the Gulfport School District. During the summer of 2017, GCCDS received funding through the National Marine Sanctuary Foundation in partnership with NOAA to further modify the curriculum for a summer program with the Boys and Girls Club of Hancock County. Measures of success: Over 400 students and teachers reached through direct programming with several hundred more potentially reached through exhibitions of work to parents, local leadership and the larger community. Outcome: Change of behavior for students, their families and larger community to reduce trash and pollution entering storm water drainage system. Stormwater education to residents of the Biloxi peninsula. The project will build upon the City of Biloxi's ongoing stormwater management resident outreach as well as with community workshops in conjunction with the property owner small grant program. Measure of success: outreach to all Biloxi residents through B-Mail and other media, at least 10 community workshops. Outcome: Change of behavior for residents to make improvements on their property to reduce run off and to reduce trash and pollution entering the stormwater drainage system. Low-impact development training and design resources. GCCDS will work with the City of Biloxi to develop training and explore possible incentives to promote low-impact development. Measure of success: Low impact development training material tailored to the Biloxi peninsula. Outcome: Economic growth with improved development Property owners small grant program to do green infrastructure projects. Around 20% of the proposed funds will have a direct impact on citizen's quality of life by making upstream stormwater improvements in the community. At least 75 small grants between $2500 and $5000 will be awarded to property owners on the Biloxi peninsula who apply for assistance to do green infrastructure projects on their property or on property along the streets in partnership with the city and with other property owners in their neighborhood. With the completion of the road and stormwater	Harrison	Yes	No	No	No	Yes	Yes	Yes	60	Yes		$ 2,080,000.00	$ -	
New	Research and Education	5881	4/17/2019	Harbor Expansion Parking Area	Along the beachfront, adjacent to the Gulfport harbor, across from the upcoming Aquarium attraction, and with access to downtown's food and beverage, gaming, and lodging, the area around Gulfport's Jones Park / Barksdale Pavilion has become the City's hub for tourism. With the expansion of recreational activities and tourism in this area, the City of Gulfport has an immediate need for additional parking. Complimenting an adjacent lot, the proposed expansion of parking along the eastern edge of Jones Park will promote workforce development by providing additional areas for workers to park, will provide visitors access to tourism, eco-tourism, and recreational activities, provide additional public access for residents and visitors to the beach and fishing opportunities, and provide access to the educational benefits associated with the new aquarium. Ultimately this parking area will ensure inadequate parking will not stifle Gulfport's booming economic development. This additional parking will complement the proposed expansion of the Gulfport Harbor. It is proposed at the southeast corner of 20th Avenue and U.S. Highway 90 and will be asphalt-paved and striped to match adjacent areas. Any end cap islands will be constructed with curb and gutter and landscaping commiserate with the area will be added.	Harrison	Yes	Yes	No	Yes	Yes	No	Yes	75	Yes		$ 2,000,000.00	$ -	
New	Research and Education	5882	4/17/2019	On-Site Animal Holding and Facility Operations Building	Development of on-site facilities at Mississippi Aquarium to house ambassador animal collection that the aquarium uses for educational outreach both at the aquarium and at schools throughout the state. The facility will also enlarge our on-site animal holding and treatment capacity to care for more animals on site and provide space for maintenance shops to handle rebuilding of pumps and equipment to increase life expectancy. Small office space for the maintenance team and aquatic team will also be included. This space will provide opportunities to partner with Mississippi higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level. This building would go on the footprint of the Masonic Lodge Building.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 1,750,000.00	$ -	
New	Research and Education	5883	4/17/2019	Conservation Awareness Campaign (through interpretive signage and exhibits)	Development and installation of dynamic graphics throughout Mississippi Aquarium's campus that will highlight critical content that supports the conservation of Mississippi's most precious water systems. Utilizing a variety of media including digital monitors, informational signage, interactive displays, and live interpreters, the aquarium will provide these world-class visuals to teach guests about a variety of species in our waterways, bayous, and the Gulf to better understand why the knowledge they are gaining is so important.	Harrison	Yes	No	No	No	No	No	Yes		Yes		$ 1,000,000.00	$ -	
New	Research and Education	5884	4/17/2019	Marine Science Digital Command Center	Construct an exhibit linking the USM Gulf Coast Research Laboratory and its fleet of vessels with visitors to the Aquarium through live and pre-produced video and interactivity by highlighting USM's research projects and scientists. Pre-produced programming would run on the screens at the Mississippi Aquarium on a regular basis including (1) Stories about scientists and how they became engaged in studying the Gulf; (2) featured research on aquaculture, marine ecology and oceanography; (3) highlights of the USM Gulf Coast Research Laboratory and related marine conservation and research resources in the region. Interpretive graphics, and large screen data sets and maps would provide context for understanding the role of specific research projects and needs in relation to challenges and opportunities in the Gulf of Mexico.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 150,000.00	$ -	

New	Research and Education	5885	5/2/2019	Development of	The ARC will build the body of knowledge around the growing One Health movement, a collaborative effort of multiple health science professionals â€" veterinary medicine, human medicine, environmental, wildlife and public health â€" to attain optimal health for people, animals, wildlife, plants and our environment. By exploring the connection between health and the environment, this interdisciplinary approach can help protect present and future generations. Over the last three decades, approximately 75% of new emerging infectious diseases have been zoonotic, meaning the diseases have been transmitted from animals to humans. Research that studies the link between human, animal and environmental health is critical to our future, yet much of the work in this area has been focused on terrestrial species. By exploring the connection between health and the environment, The ARC can help protect present and future generations. Given the centrality of water to human life, and the great diversity of species and habitats our ocean supports, there is an urgent need for research focused on aquatic ecosystems. Not only will this research lead to a greater understanding of the public health risks of contaminated seafood, beaches and water, but it could also lead to new treatments and medicines that are marine based. This space will provide opportunities to partner with Mississippi's higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 2,500,000.00	$ -	
New	Research and Education	5886	5/14/2019	Mississippi Aquarium Mobile Marine Unit (MMU)	The MMU will provide a hands-on education for both children and families alike throughout the State. Teachers and educators from grades K to 12 will have the ability to use the MMU at their schools and present a variety of lessons. These lessons can range from basic biology and anatomy, to animal care and building aquatic system all while threading in a message of costal conservation and preservation. As the MMU moves throughout the community, new relationships will be made in supporting the aquariums coastal conservation messaging to promote the health and well being of the community. The MMU enhances an important conversation about aquatic life, animal conservation, and sustainable lifestyles everywhere it rolls. The MMU will connect educators through association with the aquarium and will create a network of people passionate about the conservation and sustainability in the State of Mississippi. This request entails the build out of the MMU (a 31 ft Airstream Trailer that will be modified to look like a submarine), the vehicle to pull the MMU, and staffing of the MMU for the 4 years of operation. surrounding regions.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 450,000.00	$ -	
New	Research and Education	5887	5/20/2019	Inside Explorer Technological Programs	The Inside Explorer software utilized in educational programs will generate public awareness about the internal systems of native animals. Teaching our community about the different functions of living things gives the community a unique perspective on what they need to survive. Just like humans, living things have internal systems such as skeletal, muscular, circulatory and more. Knowing these intimate details provides a better understanding on what we can and should do to support a healthy environment and a sustainable Gulf.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 270,000.00	$ -	
New	Research and Education	5895	9/10/2019	Assessment, Restoration & Stewardship of INFINITY Land Holdings	The goal of this project is to conduct landscape-scale ecosystem restoration on the highly visible land surrounding the INFINITY Science Centerâ€"located adjacent to, and complementary to the goals of, the Mississippi Department of Marine Resource's Coastal Preservesâ€"and to couple that restoration with a robust educational program that raises awareness of the importance of the health of our natural systems to our quality of life on the Gulf Coast. The project, as proposed, has two primary components. The restoration component will serve to utilize a recently conducted habitat assessment to implement an aggressive restoration plan, resulting in numerous ecosystem services benefits such as improved water quality, connectivity with other adjacent restored parcels, flood and storm water runoff storage, significantly enhanced vegetative diversity, a decrease in invasive species, higher quality wildlife habitat, and increased safety and security for INFINITY. The second, and equally important, component of the project is public education. We will create interactive exhibits and a comprehensive education program for teachers, students and the general public that increases awareness of the value of ecosystem restoration and promotes environmental stewardship. An outdoor classroom will be constructed in order to get participants out into the actual restoration, maximizing the educational opportunity by providing a more immersive experience.	Hancock,St Tammany	Yes	No	No	Yes	No	No	No		No		$ 2,006,123.93	$ -	
New	Research and Education	5896	10/7/2019	STORM SURGE BARRIERS FOR BAY ST. LOUIS & BILOXI BAY	I HAVE A NEW CONCEPT FOR THE DESIGN AND CONSTRUCTION OF HURRICANE STORM SURGE BARRIERS, BARRIERS THAT ARE SPECIFICALLY DESIGNED FOR OUR UNIQUE BAY MOUTHS. I HAVE THE APPROVAL OF THE CONCEPTS BY CLARK STANAGE, WHO IS THE LEAD WATER CONTROL ENGINEER FOR THE WEST COAST US ARMY CORPS OF ENGINEERS, AND HAS BEEN SO FOR THE PAST 30 YEARS. HIS HOME PHONE # IS (916) 487-5215. MY BARRIERS ARE A SERIES OF ISLANDS ACROSS THE BAY MOUTHS. SEPARATING THE ISLANDS ARE CONCRETE CULVERTS, WITH FLAT BOTTOMS FLUSH WITH THE BAY FLOORS. THEY HAVE VERTICAL SIDES, NO TOPS. HINGED TO THE SIDES OF THE CULVERTS ARE STORM SURGE BARRIER GATES, similar in concept to cattle gates across a road. THESE GATES ARE NEVER CLOSED, EXCEPT DURING A HURRICANE OR A HIGH-FLOODING TIDE. AS A STORM SURGE APPROACHES OUR BAYS, AND THE SS WATER LEVEL GETS 9" HIGHER THAN A HIGH TIDE, THE GATES START TO FLOAT, AND THE INCOMING WATER CLOSES THEM. TO A VEE, NOT A WALL. A VEE SIMILAR TO THE BOW OF A SHIP, WHICH WILL BREAK UP THE SMASHING WAVES. THE STORM SURGE HIGH WATER HOLDS THE GATES CLOSED, THEY ARE NOT LOCKED CLOSED. WHEN THE SS GOES DOWN, THE HIGHER WATER INSIDE THE BAYS BLOWS THE GATES BACK OPEN. OTHER DETAILS PROVIDE FOR SHIPPING LANES, AND RAILROAD BRIDGES. I AM CURRENTLY WORKING WITH GULF COAST PRESTRESS FOR THE CONCRETE CULVERTS, AND TALKING TO ENGINEERING COMPANIES FOR THEIR ASSISTANCE. FURTHER PLANS AND LOCATION DRAWINGS ARE AVAILABLE ON REQUEST.	HARRISON, JACKSON, HANCOCK	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes	COMPLETE PROTECTION FROM STORM SURGE	$ 100.00	$ -	
New	Research and Education	5897	1/24/2020	Walter Anderson Museum of Art Creative Complex	The Walter Anderson Museum of Art requests $1,554,000 for Phases 2-4 of the Creative Complex, a campus expansion for coastal discovery and innovation, public access, and quality of life empowered by immersion in the natural world. The Creative Complex, a combined 15,000 square feet of interior and exterior spaces and public gardens, will be a center of education and recreation where visitors make connections to 21st century landscapes and applications, including those in science and technology, aquaculture and foodways, tourism, environmental stewardship, and restoration. The purpose of the project is to cultivate lifelong curiosity and connection to place through the convergences of culture, economy, education, and the environment. As American author Wendell Berry writes, â€œNeither nature nor people alone can produce human sustenance, but only the two together, culturally wedded.â€ Art, as a force for meaning-making and cultural resonance, is critical to the story of the Gulf Coast's resiliency. Walter Anderson's art contributes to the region's public education systems, tourism and community development, and conservation efforts. His studies of flora, fauna, and landscapes â€" and his history of exploring the barrier island wilderness â€" provide points of ignition for recreational and research-based programs that connect communities to their estuarine landscapes, as well as to the urgent need to study and protect them. WAMA's partners in science and restoration, including The University of Southern Mississippi Marine Education Center and the Grand Bay National Estuarine Research Reserve, are looking to art to communicate about complex systems. â€œOur goal is conservation, but conservation is complicated,â€ says Dr. Ayesha Gray of the Grand Bay NERR. â€œConnecting nature, art and science is part of the heritage of the Gulf Coast and that legacy is exemplified by Walter Anderson's work,â€ says Kelly Lucas, Ph.D., Interim Associate Vice President for Research of Coastal Operations and Director of the Thad Cochran Marine Aquaculture Center at The University of Mississippi. â€œ[Walter] Anderson is THE artist of the Gulf of Mexico,â€ writes Jack E. Davis in his Pulitzer Prize-winning environmental history, 'The Gulf: The Making of an American Sea.' Anderson's journeys to the federally-designated wilderness of Horn Island from the 1940s through 1960s exposed him to its biodiversity and its scientific and geographical importance. He depicted its hurricanes, its animal and plant life, its eroding sands, and its unadulterated brilliance. â€œ... His lines are vivid, limber, and alive,â€ continues Davis. â€œThey are the lines of the Gulf of Mexico and its wildlife. They transpired from his search for wholeness in nature, a â€˜significant form' that he sought to discover not merely from the visual form but from the biological, by touching, feeling, listening, and even tasting.â€ This art history sets the stage for programs and excursions, both on land and water, that merge recreation, observation, and creative communication with geographical study, microplastics sampling, beach restoration, oceanography, and environmental science. Programs at the completed Creative Complex will focus on five areas: Nature and Conservation; Science and Technology; Industry and Business; Culture and Community; and Art and Creativity.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	70	Yes		$ 2,500,000.00	$ 900,000.00	
New	Research and Education	5898	3/3/2020	Improvement of Rehabilitation Facilities for Sea Turtles and Marine Mammal sin Mississippi to Service to north central Gulf of Mexico Region (MS, AL, LA)	The north central Gulf of Mexico is home to endangered and protected species such as bottlenose dolphins (Tursiops truncatus), West Indian manatees (Trichechus manatus), as well as loggerhead (Caretta caretta), green (Chelonia mydas) and Kemp's ridley (Lepidochelys kempii) sea turtles. These species are all at risk to both anthropogenic and natural threats such as pollution, boat strikes, infectious diseases, fisheries interactions, and natural disasters â€" making necessary the creation of rehabilitation centers to rescue and treat sick and injured marine mammals and sea turtles. The Institute for Marine Mammal Studies (IMMS) is a marine mammal and sea turtle rehabilitation facility, strategically located on the Mississippi gulf coast. IMMS has been involved in the rescue, rehabilitation, and release of marine mammals and sea turtles since 1984, and IMMS' staff along with veterinarians from MSU's College of Veterinary Medicine have the necessary experience, facilities, and capabilities to conduct rescues and rehabilitation activities within this region as well as coordinating with both State and Federal agencies. Following the Deepwater Horizon (DWH) Oil Spill in 2010, IMMS built a turtle rehabilitation center to house sick and injured sea turtles and marine mammals. This structure was originally intended to be temporary and allow IMMS to respond to the spill alone. Since 2010, IMMS has responded to over 1,000 live sea turtle strandings, and has assisted in the rehabilitation of a large number of cold-stunned sea turtles which were flown to Gulfport from the New England Aquarium. Many of the turtles admitted to the facility do not fully recover during the warm summer months, resulting in the use of the rehabilitation facilities on a year-round basis. IMMS is in need of a permanent rehabilitation facility to provide better conditions for turtles that over-winter. An increased number of tanks, as well as larger tanks, and an improved drainage system will also allow IMMS and MSU to provide care for large sub adult and adult sea turtles that require a long-term rehabilitation plan. Moreover, with an enhanced rehabilitation center, IMMS will be able to facilitate sea turtle conservation on a national and regional level by being able to offer support to other stranding facilities and provide optimal high level rehabilitative care for a large number of turtles during environmental disasters (e.g., oil spills, blue-green algal blooms, and red tide). Currently, the IMMS stranding team responds to live turtles in Alabama and Mississippi, and has historically responded to marine mammal and sea turtle strandings in eastern Louisiana. The work of the IMMS stranding team can be greatly enhanced by the establishment of two satellite facilities, created for the purpose of triaging sick and injured sea turtles prior to transport back to the main campus in Gulfport, MS. This would enable IMMS to better respond to sea turtle strandings in eastern Louisiana and Alabama. The first of these satellite facilities would be established in/or around Slidell, Louisiana, enabling IMMS to respond to incidentally captured sea turtles in eastern Louisiana. The second satellite facility would be established near Mobile, Alabama and would allow for the enhancement of IMMS' established response to live turtle strandings in Alabama. Furthermore, the addition of these facilities would for enhanced education and outreach in these regions, as the mitigation of incidental capture is only minimally addressed in these areas at present. IMMS is a registered organization in the States of Alabama and Louisiana.	Harrison	Yes	No	No	No	No	No	Yes	75	Yes		$ 4,950,000.00	$ -	

New	Research and Education	5901	4/30/2020	Enhancing Gulf Waters through Forested Watershed Restoration	Overview of Proposed Activity Background: The Gulf of Mexico's forests, when healthy, reduce sediment and nutrient yields, regulate surface water flows, and improve groundwater recharge relative to other land uses (Sun et al., 2004; Lockaby et al. 2013). They offer recreational opportunities, wildlife habitat, improved air quality, support for the region's economy, and are an integral part of the carbon cycle. Protecting forests at risk of conversion to more intensive uses (Klepzig et al., 2014), restoring native species (Brantley et al., 2018), controlling invasive species, managing for resilience against catastrophic loss (e.g., wildfire, hurricane, drought, pests, etc.), and restoring forested wetlands, floodplains and riparian areas are vital to the health of the Gulf (Vose et al., 2011). Proposal: This application seeks to establish a program that will enhance and maintain water quality and quantity by protecting, managing, and restoring forested ecosystems. The Program is centered on advancing the RESTORE Council's water quality and quantity goal, but benefits will accrue in all goals. The focus is on protecting and restoring forests, including urban forests, in priority watersheds in Alabama, Florida and Mississippi where the need is great, and Partners stand ready to assist and leverage investments. The Program is a scalable, science-based approach implemented on public and private lands. It involves: •Landowner outreach techniques that build upon and look to enhance existing tools and networks. •Coordinated delivery through State Forestry Agencies in Alabama, Florida, and Mississippi. •Focused recruitment of forest landowners in targeted watersheds. •Science-based decision support from the USDA Forest Service Southern Research Station who will use the Soil and Water Assessment Tool (SWAT) model and other data and tools to inform priorities, assess and monitor project impacts, and inform adaptive-management decisions. •Potentially using a portion of funding for an open and competitive Request for Proposals (RFP) to extend the reach of these efforts and cultivate innovation. •Targeted alignment with other federal, state, and non-federal programs as a program multiplier to conduct similar work upstream of the RESTORE coastal area. •Use of USDA practices and standards to ensure compliance with environmental and cultural resource requirements. There are limited risks and uncertainties: private landowner willingness to participate can cause delays and require strategic adjustments, catastrophic events (e.g., hurricanes, wildfires) can alter the landscape and impact expected outcomes, and weather extremes (e.g., droughts, excessive rain) can delay implementation. Anticipated outcomes resulting in improved water quality and quantity: avoided land conversion and increased forest cover, increased forest management activities and best management practices, increased landowner understanding of forest management benefits, improved wildlife habitat, and added community resilience. Priority Criteria Information	Hancock,Stone,St Tammany,Mobile ,Jackson,Forrest, Washington,Harri son,George,Perry ,Pearl River	Yes	No	No	No	No	Yes	No		No		$ 30,000,000.00	$ -	
New	Research and Education	5903	4/30/2020	ISC Sustainability and Restoration Initiative	The project will expand upon projects from 2015 NRDA funding received by INFINITY Science Center that would introduce the importance of sustainability and renewable energy as valuable aspects of restoration and future protection of wetland ecosystems. Electricity that is non-solar requires the use of fossil fuels and the expansive use of fossil fuels created the demand that led to the BP disaster. Reducing the use of fossil fuels for electricity decreases the demand for fossil-fueled sources of electricity thereby reducing the overall risk of further disasters. This project includes the addition of solar panels with battery backup for INFINITY Science Center with an educational component inside the building to increase public learning and awareness about the importance of sustainability and renewable energy in ongoing wetland protection. The project will also ensure that our electric trams, purchased through INFINITY's initial NRDA award, are solar powered rather than powered by electricity that is from non-renewable fossil fuel sources. The project aligns with NRDA and Restore Funding purpose and guidelines. INFINITY plans to lead by example along the Gulf Coast of Mississippi through the implementation of non-fossil fueled solar energy use thereby encouraging others along the coast to adopt renewable energy practices and sources. INFINITY is highly visible along eastbound I-10. Passing travelers will see the solar panels and our sign will encourage these travelers to go to our website to learn more about renewable energy and why INFINITY chose to lead along the coast with solar renewable energy. The program aligns with the main strategic goals of INFINITY Science Center for financial sustainability to ensure continued programming and to lead in environmental education and stewardship of our wetlands.	Hancock	Yes	No	No	Yes	No	No	Yes	50	Yes		$ 2,000,000.00	$ -	
New	Research and Education	5904	4/30/2020	A comprehensive marine debris intervention strategy to help restore sea turtles in the Gulf of Mexico	NOAA Project ID#14251: Overarching Goals Related to Nexus to Injury Contribute to the recovery of sea turtle populations injured by the BP oil disaster by addressing the anthropogenic threat of marine debris and derelict fishing gear. This threat would be ameliorated through the removal, reduction and prevention of marine debris and ghost fishing gear, effectively decreasing barriers to nesting sites, enhancing sea turtle nesting opportunity and productivity and lowering the risk of hatchling, sub-adult and adult entrapment or entanglement in derelict fishing gear. Additional goals are: 1) to build capacity and understanding within the recreational and commercial fishing sectors across the Gulf of Mexico to reduce loss of, and minimize risks and biological impacts resulting from ghost fishing gear; and 2) to engage and educate members of the consumer packaging and product industry to support and advance upstream, private sector intervention strategies or policies to reduce macroplastic inputs to the Gulf of Mexico. The project would be developed and implemented to maximize benefits for injured avifauna and marine mammal populations affected by marine debris and ghost fishing gear. Project Overview In collaboration with local conservation organizations, scientists and fishing communities throughout the Gulf of Mexico, Ocean Conservancy proposes a comprehensive marine debris intervention strategy to help restore sea turtles in ocean waters impacted by the Deepwater Horizon (DWH) oil disaster. This work is centered on four specific objectives, each advanced by a suite of integrated activities. This work leverages our institutional expertise through the International Coastal Cleanup and Global Ghost Gear Initiative, new scientific research and our successful effort to secure a framework and funding for Gulf restoration following the BP event to advance measurable conservation outcomes and management decisions. Ocean Conservancy's decentralized volunteer infrastructure will allow local orga nizations to plan and conduct cleanups more strategically and effectively, and allocate effort where conservation impact is likely to have the greatest benefit. This body of work builds on key relationships in Gulf Coast states that Ocean Conservancy has developed over the last two decades, including with the fishing community and numerous ICC partners. The work is informed by new research findings from Ocean Conservancy's extensive marine debris database to identify marine debris hotspots both in the United States and internationally (e.g., Mexico and Caribbean). Objective 1: Identify geospatial marine debris hotspots, estimate vulnerability and identify intervention opportunities Objective 2: Reduce impact on marine wildlife by removing macroplastic marine debris and derelict fishing gear at strategic times and locations on beaches, at piers and in offshore habitats Objective 3: Inform the recreational and commercial fishing communities on how to best reduce lost/derelict fishing gear to better protect marine wildlife Objective 4: Build political and private sector understanding and support from the largest contributing sources/cities/businesses for upstream intervention strategies NOTE: Detailed information on project background, activities for each objective listed above, potential contractors and partners, potential deliverables, monitoring and adaptive management, metrics of success, cost effectiveness, likelihood of success, benefits to other natural resources, and project consistency with DWH NRDA Trustee Council goals can be found in the attached project description (pdf). A detailed budget is also available upon request. date Entered: Oct 24, 2019 Edited Nov 6, 2019		Yes	No	No	No	No	No	No		No		$ 5,500,000.00	$ -	
New	Research and Education	5907	5/2/2020	Reduce Harmful and Lethal Impacts to Dolphins from Illegal Feeding Activities	NOAA Project ID# 14285: It has been well documented for more than 20 years that illegally feeding wild dolphins can lead to a variety of high risk situations that place both dolphins and people in danger (Cunningham-Smith et al., 2006; NMFS 1994; Orams et al., 2002; Samuels & Bejder, 2004). When dolphins learn to associate people with food, unnatural behaviors such as begging for handouts disrupt their natural foraging patterns and become an abnormal and risky feeding strategy (NMFS 1994; Powell & Wells, 2011). Fed dolphins approach boats more readily looking for handouts, thus increasing the animals' risk for boat strike or gear entanglement (Bechdel et al., 2009; Powell & Wells, 2011; Samuels & Bejder, 2004; Wells & Scott, 1997). Fed dolphins can also become targets for human acts of retaliation, including fishers who become frustrated by dolphins begging, removing bait or catch from their lines, or scavenging on undersized throw-backs. Begging behaviors can be passed through a dolphin population via social learning, thus perpetuating and increasing the prevalence of the problem over time (Donoghue et al., 2002; Wells, 2003; Whitehead et al., 2004). Calves of provisioned mothers are at increased risk for compromised developmental and social learning skills, predation, and insufficient hunting experience due to neglect while mothers are seeking handouts from humans (Foroughirad & Mann, 2013; Mann & Barnett, 1999; Mann & Kemps, 2003). Illegal feeding of wild dolphins has been documented or reported in every Gulf state, with several areas being considered hot-spots, and by various water users (i.e. tourism vessels, commercial and recreational fishermen etc) . Therefore, the goal of this project is to reduce lethal impacts to dolphins from illegal feeding activities known to occur in Gulf state waters by effectively changing human behaviors through a targeted outreach and education strategy in a phased approach: (1) Review outcomes from social science studies previously conducted for d olphin-human interactions (e.g., Duda et al. 2013; Responsive Management, 2011 and 2013), evaluate additional needs, and conduct additional social science studies (e.g., focus groups, surveys) to fully characterize the nature and extent of illegal feeding by user group, their motivations/perceptions/attitudes, and receptiveness to different messages and tools; (2) based on the social science studies, develop a comprehensive and targeted outreach plan to effectively educate and inform target audiences about the harm of feeding wild dolphins and how to help promote dolphin conservation; (3) partner with states and local stakeholders to widely distribute and communicate educational tools and messages to reach targeted user groups; (4) Repeat the social science studies to evaluate the use of informed and targeted outreach/education to effectively change human behaviors. Date Entered: Oct 25, 2019 Edited: oct 28, 2019		Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -	
New	Research and Education	5911	5/2/2020	Micro-refugia for shorebirds and seabirds - An incentive based project	NOAA Project ID#14311 The Gulf Coast has clearly been identified as incredibly important for shorebirds and seabirds with threats of habitat destruction from coastal storms, sea level rise, and human factors continuing to impact their populations. Human populations and tourism activities continue to grow along the Gulf Coast limiting habitat availability for shorebirds and waterbirds. Much attention has been placed on increasing nesting opportunities for many species breeding species through habitat restoration and stewardship initiatives. However, less emphasis has been placed on the wintering and migratory periods when there is an influx of tourists to the Gulf region. This has greatly impacted where birds can feed and roost to maintain their condition and prepare them for migration. Carry-over effects that sub-optimal habitat in wintering areas and migration stopovers can be substantial to populations particularly those already suppressed or when northern sites are also diminished (e.g. Delaware Bay). This project aims to increase the number of year-round refugia (protected areas) in the Gulf Coast region with incentive-based conservation. Public and private shorelines are major destinations for recreational use and the closure of those areas comes at some cost to the landowners. Funding is needed to incentivize the closure of small portions of beach to offset the cost of the closure. The small areas to be identified are modeled after Fort De Soto County Park, Pinellas County, FL where the park has set aside a â€œShorebird Habitat Areaâ€ where there is no entry. With a mere 300 meters of beach closed, this area has become a destination for large flocks of shorebirds and seabirds to rest and feed when sub-tidal sand flats and spits are covered during high tides. This is one of the only places in the immediate region that red knot flocks have been consistently recorded for nearly 12 months out of the year as one example of the success of this strategy. This â€œmicro-refugiaâ€ could be a low- cost/high-reward strategy if employed judiciously throughout the Gulf. There are key characteristics that make this a potentially powerful strategy if replicated gulf-wide. This include: • Public and private shorelines that that have high human use • Is or is in close proximity to existing resources foraging areas such that it provides feeding and/or roosting opportunity • Ease of enforcement The first phase of this project would be to work with partners to identify sites that would be targeted for incentive-based refugia. The second phase would be to determine the annual cost that is necessary and reasonable to offset public use of beaches on public and/or private lands. Finally, implementation would be to establish 2-3 year agreements with agencies and private landowners to evaluate the bird response and measure success of the program for future funding.		Yes	No	No	No	No	No	No		No		$ 500,000.00	$ -	
New	Research and Education	5913	5/2/2020	Experimental Oyster Leases as a Platform for Demonstrating Effective Restoration Practices	NOAA Project ID#14308 The continued lack of productivity from oyster reefs in the northern Gulf of Mexico remains a critical ecological and economic issue for the region. Geographic proximity and inter-connectivity of the Mississippi, Louisiana and Alabama coastal systems â€" in addition to the commonality of issues with oyster populations those areas â€" support the concept of a multi-state collaboration on this innovative regional project. We propose the establishment of leases in Mississippi, Louisiana and Alabama coastal waters for the creation of reefs to provide science-based guidance for successful restoration programs. The creation of reefs on water bottoms leased to states and/or research universities will provide numerous advantages unattainable by other means, including: (a) controlled/restricted access to reefs to facilitate long-term assessment, (b) implementation of a sound experimental design for rigorous statistical comparisons, (c) siting of leases along a gradient of varying hydrological conditions to assess regional scale functionality, (d) integration of cost-benefit analyses to assess and maximize ROI for reef productivity, and (e) establishment of appropriately scaled structures to demonstrate effective coastal restoration practices across a broad spatial extent. Twelve leases of 75-acre coverage each are proposed in Mississippi, Louisiana and Alabama coastal waters. Reefs must be large enough to be representative of naturally-occurring reefs but not so large as to be prohibitive from a cost or maintenance perspective. Multiple reefs are also required to serve as replicates for assessing within-site variability of factors of interest. In consideration of those factors, reef plots of one acre in areal coverage are proposed. Each lease will be divided into two sections, one of which will encompass 50 acres and contain nine 1-acre reef plots therein. The inclusion of nine reef plots within each lease would allow for a minimum of three replicates for a maximum of three t reatment levels within each lease. The second section will encompass 25 acres to allow for the inclusion of larger reef plots for supplemental research purposes. Specific experimental treatments and their step-wise implementation over time may include cultch type/size, planting density, relief/height, and application of hatchery-reared oysters. Of critical importance to project success is development of a strategy which allows for incrementally addressing key research questions from construction through long-term establishment, and a tiered assessment approach, inclusive of construction monitoring, performance monitoring and monitoring for adaptive management, for each successive investigatory action is proposed. This design will provide the foundation for a collective of long-term reference sites for which restoration strategies can be assessed with clearly-defined goals based on quantifiable metrics. The project will require a staged implementation process, to include (1) site selection, permit acquisition and lease delineation, (2) reef construction and (3) long-term monitoring. Site selection will be based primarily on assessments of hydrological conditions and benthic suitability, and federal and/or state permits may be required for leasing of water bottoms, cultural resources and/or protected species. Reef construction will include acquisition of cultch materials and deployment of those materials, both of which will be based on the final determination of experimental treatments. Monitoring for assessment of the performance and longevity of the treatments variables will necessarily be an extended period to properly and quantitatively evaluate the relative production and persistence of the reef materials and construction strategies; a five-year monitoring period was used as the basis for cost estimation, but monitoring should continue beyond that period to determine long-term ROI. Estimated cost total provided is inclusive of all three phases. Date entered: Oct 25, 2019	Harrison	Yes	No	No	No	No	No	No		No		$ 23,825,000.00	$ -	

New	Research and Education	5918	5/2/2020	Reducing sea turtle bycatch at shore-based recreational fishing sites	NOAA Project ID#13584: This project idea focuses on addressing bycatch of sea turtles at shore-based locations that concentrate recreational fishing (fishing sites), such as fishing piers, bridges, and other shoreline structures, and would restore for injured sea turtles by reducing this bycatch. The goal of the project would be to identify factors (e.g., bait type, hook type, discarded bait in the area, pier lighting, depth of pier, fishing time, etc.) contributing to the incidental capture of sea turtles at fishing sites and to then implement voluntary programs to reduce captures from occurring. This could be accomplished through the following: 1) Create an inventory of fishing sites in the GOM and characterize the sites relative to variables that may influence bycatch of sea turtles (e.g., night fishing, fish cleaning stations, bait types, hook types, etc.). 2) Characterize bycatch of sea turtles at fishing sites through angler surveys, the collection of standardized information from incidentally captured turtles reported to the STSSN, and assessment of gear recovered, to better understand co-factors influencing sea turtle bycatch, 3) Develop and implement a comprehensive educational effort to the recreational fishing community to promote reporting of incidental captures to trained responders to reduce injury to bycaught sea turtles, and 4) Develop, test, and implement a pilot program to reduce sea turtle bycatch at fishing sites through implementation of voluntary fishing practices; this could involve voluntary measures such as bait type, hook type, or other identified co-factors. The project is envisioned as a 5-year project, but it could be scaled up or down based on funds available. It is envisioned to be implemented in each of the 5 gulf states, with potential variations to implementation based on an individual state's needs. Some of this work has been initiated by NOAA and/or by the STSSN already, and the project would be designed to build on existing knowledge and efforts. NOAA and the Gulf states could jointly implement this project. Project Entered: May 22,2017 Edited Oct 25, 2019		Yes	No	No	No	No	No	No		No		$ 1,000,000.00	$ -	
New	Research and Education	5923	5/2/2020	Identifying sea turtle interaction hotspots in the Gulf of Mexico shrimp fishery using passive acoustics	NOAA Project ID#14283 In the southeastern U.S. shrimp fishery, Turtle Excluder Devices (TEDs) have been shown to be 97% effective at excluding turtles. However, the effectiveness of TEDs largely dependent on fisher compliance with proper installation and operational maintenance of the devices. To ensure proper TED compliance, NOAA) developed a Gear Monitoring Team (GMT) program, which operates in the Gulf States out of the NMFS Pascagoula Lab. The GMT works with the fishing industry to improve their knowledge and understanding of how to effectively build, use, and maintain TEDs. This is achieved through fisher workshops and courtesy dock-side and at-sea TED inspections. The GMT also works closely with the Observer Program to identify specific areas of bycatch concern within the Gulf. However, turtles interactions with shrimp trawls are seldom detected by onboard observers because most are expelled from the mouth of the trawl or slide out of the TED escape opening (alive or dead) during haul-back. Therefore, the GMT is often times forced to be reactive and focus outreach efforts to areas where stranding events have occurred. Sea turtle restoration efforts in the shrimp fishery could greatly benefit from a better understanding of the spatial and temporal distribution of sea turtle interactions. This would allow the GMT to be proactive and strategically target outreach efforts in â€œhotspotâ€areas where and when high frequencies of sea turtle interactions are likely to occur. Hotspot identification could also be used to inform the STSSN and predict areas of increased likelihood of vessel strikes. NOAA researchers based in Pascagoula Mississippi, have discovered that sea turtles, due to their hard shells, make a distinctive sound when they come into contact with the aluminum bars of the TED, as compared to other marine organisms. We propose to place autonomous passive acoustic recorders (Ocean Instruments Sound Trap) on TEDs during commercial trawling operations in conjunction with the man datory observer program and enhance analytical capacity within the program. The acoustic recordings will be used along with electronic logbooks to calculate the time and positions where interactions occur. This methodology will provide a cost effective way to identify spatial and temporal sea turtle hotspots to inform GMT outreach efforts and TED inspections, management, and future restoration projects. Date Entered: Oct 25, 2019		Yes	No	No	No	No	No	No		No		$ 3,200,000.00	$ -	
New	Research and Education	5927	5/2/2020	Modeling bird populations across the Gulf of Mexico to inform restoration planning	NOAA Project ID#14265 Robust assessments of bird population trends and their drivers are essential to inform selection of priority species and habitats for conservation and restoration. Resource managers need to know which species are declining as well as which habitats and regions are resilient to future change in order to make informed decisions that protect birds, their habitats, and their communities. Furthermore, this information must be shared with resource managers in an accessible format that enables them to make efficient and timely management and conservation decisions. Therefore, we propose to model and project the effects of climate and land cover change on the sustainability and resiliency of bird communities across the Gulf of Mexico. Traditional analytical methods utilize data from single surveys, none of which have sufficient spatial and temporal coverage for robust modeling. We will resolve this issue and provide the accurate, high-resolution models needed to inform Gulf conservation by implementing a recently-developed integrated modeling technique. To maximize inference from across a wide range of research and monitoring projects, we will develop Bayesian integrated hierarchical models that can effectively combine data across multiple structured and semi-structured protocols. We will use these methods to produce robust estimates of population trends and distributions for multiple landbird, shorebird, and marsh bird species, while accounting for uncertainty. By incorporating powerful forecasting of land cover change across the Gulf we will be capable of describing how current bird distributions and trends will change in the future. Species-specific maps of current and future distributions will be created from this effort and provided to resource managers. These distribution/abundance models will incorporate a suite of remotely-sensed land cover and climate predictors variables used in recent Gulf-wide habitat modeling efforts (Lankford et al. 2018) to model environm ental relationships. These may include proportional cover of estuarine and palustrine wetland, shoreline, agriculture, grassland, shrubland, and developed habitats; landscape metrics such as patch size or connectivity of land cover types; length of sandy beach; annual spatially-interpolated climate variables; elevation; and distance to coast or other important habitats or features. The precise suite of environmental predictors wil be selected on a species-specific basis based on ecology and life-history characteristics to ensure biologically-relevant predictors are included and increase model performance. The projected distribution maps will be produced at a high spatial resolution for multiple time periods spanning the 1960s through the 2050s. These projected distribution maps should be particularly useful to resource managers, including for identifying: 1) future priority areas to conserve or restore, 2) areas that can serve as corridors connecting current and future bird habitat, 3) areas where management efforts can be conducted that will help transition the land cover from its current form (e.g., agricultural field) to a habitat type that will support birds in the future (e.g., a wetland), and 4) strongholds that are important today and will continue to be important in the future, and conserving or restoring those areas as needed. Our primary goal is to empower resource managers and policy-makers to make informed conservation, restoration, and policy decisions based on knowledge of historic, current, and future bird distributions, as well as the environmental processes driving these trends.		Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -	
New	Research and Education	5928	5/2/2020	Developing a Gulf-wide bird population database to inform restoration planning	NOAA Project ID# 14264 Across the Gulf of Mexico, bird communities and the habitats that support them are threatened by many concurrent and synergistic threats including human development, disturbances such as oil spills, and climate change. A central challenge to developing the understanding of bird status and distributions needed to inform effective restoration planning has been the lack of a central database to house and share regionwide survey data. Extensive bird occurrence and abundance data have been collected across the Gulf of Mexico prior to and following the Deepwater Horizon oil spill. These data include observations from multi-decadal monitoring programs that provide a historical context for current bird distribution and abundance. Yet currently data are scattered across many proprietary databases, if they exist in a database at all, stored in a multitude of data structures and formats. This prevents the integration, or even awareness, of data needed to achieve restoration planning goals. Therefore, we will compile available avian count and occurrence datasets in a central relational data warehouse to facilitate subsequent analyses and make these data available to land managers and restoration planners. Extensive semi-structured community science data (i.e., data collected by volunteers) are available for Gulf of Mexico bird species through monitoring programs and databases including eBird, National Audubon Society's Christmas Bird Count, U.S. Geological Survey's Breeding Bird Survey, and state-level colonial waterbird surveys. By comparison, structured data rely on more intensive sampling and standardized protocols that provide the additional information necessary to account for imperfect detection and produce accurate abundance estimates. Multiple structured datasets also exist for suites of birds across the Gulf of Mexico, including the Gulf of Mexico Marsh Bird Atlas and Audubon Coastal Bird Survey. Moreover, many other individuals and entities possess Gulf of Mexico bir d occurrence and abundance data, including Natural Resource Damage Assessment oiled bird surveys; targeted surveys that focus on a single species, guild, or site such as National Audubon Society Least Tern and Piping Plover monitoring; and academic research. Audubon has already begun compiling structured and semi-structured data for species included in this proposal. We will expand this collection by working with resource managers and the Gulf of Mexico Avian Monitoring Network (GoMAMN) to coordinate discovery and access of additional public and private datasets. To transfer project findings to resource managers, compiled data will be migrated to a central warehouse and integrated with tools that give conservation and resource managers easy access to a wide variety of data updated regularly. We propose to leverage and expand the work of the Avian Knowledge Network to build the technical infrastructure to easily and rapidly describe datasets, integrate the bird data into a data catalog using newly developed ingestion and translation tools, and develop new data exploration tools. The proposed data management developments will house counts as well as associated sampling details and metadata (e.g., date, time of day, and weather). A publicly accessible interface will enable users to create customizable queries, to download data, or to view summaries and maps of raw data across protocols. We will integrate data upload and transfer abilities to enable data submission throughout and after the project's tenure. This centralized database will provide resource managers the data they need to develop informed management actions in conservation areas. By compiling all available bird data into a single location with an interactive interface, resource managers will be able to identify gaps within bird distributions where targeted restoration efforts would increase suitability for focal bird species. Moreover, by providing a Gulf-wide view, resource managers would have access t o the landscape-scale information they need to ensure the connectivity among restoration and natural sites needed to increase the likelihood of restoration success. This information will enable resource managers to prioritize allocation of resources where they will have the greatest impact, and make informed decisions about which management strategies will best support birds today and in the future. This database would be a huge first step that explicitly aligns with the Gulf of Mexico Avian Monitoring Network (GoMAMN) Strategic Monitoring Plan (Adams et al., in press). If funded, this becomes a foundational piece that would not only support bird conservation in the Gulf, but also has the potential to inform Restoration Planning and Restoration Evaluation. Date Entered: Oct 24, 2019		Yes	No	No	No	No	No	No		No		$ 1,200,000.00	$ -	
New	Research and Education	5930	5/2/2020	Coordinated Monitoring of Birds for Restoration and Conservation across the Northern Gulf of Mexico	NOAA Project ID# 14256 Birds are a conspicuous and remarkable natural resource of the Gulf of Mexico with hundreds of species and billions of individuals supported at some point during their annual lifecycle by barrier islands, beaches, marshes, and coastal forests across the Gulf ecosystem. While birds are an indicator of ecosystem health and natural resources on which humans rely across the region, the Deepwater Horizon (DWH) oil spill affected 93 species and potentially over 100,000 individuals through oil exposure to individuals and their habitats. Impacts on global populations are likely greatest on the 45 injured species, which make up many lost individuals that breed within habitats located in the five Gulf States. Reduced breeding members or limited nesting habitat can substantially limit recruitment, thereby undermining state and federal recovery efforts. Understanding bird-habitat associations and responses to management efforts can drastically improve and inform restoration planning. The ability to monitor injured species across the Gulf states would be instrumental in assessing past restoration efforts (i.e., birds recovered per project investment), which is crucial to implementing successful future restoration projects. The lack of adequate pre-DWH spill data to inform decision-makers and provide a robust assessment of realized damages and planned restoration efforts for birds highlighted the need for region-wide monitoring. Our primary objective is to collect information that will establish a baseline of the status and trends of avian populations in a changing coastal landscape, as well as provide a better assessment of damages to avian resources after a future natural or anthropogenic disaster. Data collection will be used to answer pressing questions related to how populations respond to management actions, such as restoration, vegetation plantings, prescribed fire, and ecological processes, such as hurricanes, habitat succession, predation, that have been identified as h igh priorities (i.e., high uncertainty and high impact on populations) through a structured decision-making process. To provide crucial data on injured bird species along the northern Gulf Coast, we plan to implement our monitoring strategy over three distinct phases. Phase 1 would involve: (1) coordinating with state, federal, and NGO partners around the northern Gulf coast to leverage existing avian and abiotic datasets (e.g., NOAA Sentinel Site Program, USFWS Inventory & Monitoring program), (2) collating the available disparate datasets and determining common links that can be used to reduce uncertainty related to avian populations, (3) linking existing datasets to query the data needed to address uncertainty, (4) assessing potential sites and logistics for on-the-ground monitoring in each state. Phase 2 would be an on-the-ground effort to asses the status and trends of injured avian resources and habitats during the breeding season in each Gulf state. This would use a network of a minimum of 5 nodes to achieve spatially uniform regionwide coverage, where we will monitor the species-specific number of individuals in each area and, when possible, breeding parameters. Each sampling node will consist of an 80 km radius around one of the NOAA Next Generation Radar stations, which leverages the spatially largest and temporally longest running biological data set in North America to assess avian populations via remote sensing as well as covers important bird habitats on public lands and allows a concerted effort in a spatially manageable area. Phase 3 would focus on-the-ground efforts at assessing the success of restoration projects to determine return on investment for breeding avian resources (i.e., birds/dollar spent) within the 5 sampling nodes, which would focus more specifically on TIG-funded restoration projects. Budget Range Phase 1: 2 years - $950,000 to $1,000,000 Phase 2: 5 years - $7,800,000 to $8,100,000 Phase 3: 5 years - $9,250,000 to $9,600,000 Date Entered: Oct 24, 2019		Yes	No	No	No	No	No	No		No		$ 18,700,000.00	$ -	

New	Research and Education	5933	5/3/2020	Audubon Coastal Bird Stewardship	NOAA Project ID#14243 Beach-nesting birds across the Gulf of Mexico encounter a wide array of challenges to successful reproduction. Because of this, a multidisciplinary, adaptive approach is needed to address ever-changing conditions and threats like human disturbance, unbalanced predator populations, habitat loss, sea-level rise, and increased storm intensity. This multifaceted approach to beach-nesting bird conservation has been proven successful in the recovery efforts of Piping Plovers on the Atlantic Coast over the last 30 years, and can be applied to many other species that still face substantial challenges and declining populations, including those along the northern Gulf of Mexico. Building on a successful foundation already created by the National Audubon Society, a sustained region-wide coastal bird stewardship program will include monitoring for reproductive success and assessing threats, community engagement, education, habitat and predator management, policy action, and law enforcement training and support. Audubon's vision for beach-nesting bird management includes buy-in from and collaboration with a coalition of partners including federal and state agencies, local municipalities, public and private land managers and other conservation organizations. Guided by the work of the Deepwater Horizon Natural Resource Damage Assessment Trustees, the Trustee Implementation Groups, and the RESTORE Council, Audubon is proposing a region-wide Coastal Bird Stewardship Program. Such a program will be able to implement most of the restoration approaches identified in the Deepwater Horizon Oil Spill Natural Resource Damage Assessment â€" Strategic Framework for Bird Restoration Activities (June 2017) that guides the restoration efforts for birds. These approaches include the restoration and conservation of bird nesting and foraging habitat (a priority for this restoration plan), establishing or restoring breeding colonies, preventing incidental bird mortality from predators and humans, re storing and enhancing dunes and beaches, enhancing barrier and coastal islands, and protecting and conserving coastal habitats. Through a region-wide, comprehensive approach informed by local management needs, this program would maximize effectiveness, efficiency, and benefits to injured bird species. Community engagement and strategic partnerships with community leaders will be key to the success of this program. Specifically, this program will also engage youth and school groups, veterans, and diverse communities in bird conservation efforts throughout the Gulf Coast. Audubon's Coastal Bird Stewardship Program is designed to build on and unify current programs within each state, as well as the efforts from early restoration projects like the Department of the Interior's Enhanced Management of Avian Breeding Habitat Injured by Response Activities in the Florida Panhandle, Alabama and Mississippi, which was completed in 2017. The vast number of individuals, diversity of species, broad ranges of habitats and threats, and specific life history requirements of birds injured by the BP oil spill necessitate a portfolio of restoration approaches to adequately address injuries across the region. The types of activities that can be conducted via the Coastal Bird Stewardship Program include: - stewarding nesting and foraging areas with public outreach and education; - increasing the availability of foraging and nesting habitat; - restoring and enhancing dunes and beaches by planting vegetation to protect the dunes; - supporting the strategic renourishment of beaches through sediment addition; - using acoustic vocalization playbacks and decoys to attract breeding adults to restoration sites; - protecting dune systems from overuse by humans; - monitoring for reproductive success; - conducting targeted predator management as needed; and - reducing human disturbance around sensitive nesting areas. Date Entered: Oct 22, 2019		Yes	No	No	No	No	No	No		No		$ 15,000,000.00	$ -	
New	Research and Education	5936	5/3/2020	Kemp's ridley Stock Assessment	NOAA Project ID# 14185 On October 17, 2018 the Gulf States Marine Fisheries Commission (GSMFC) hosted a special session on the Kemp's ridley sea turtle during their Annual Meeting, held at South Padre Island, Texas. The aim of this session was to update the GSMFC on the present state of knowledge on the ecology and population status of the Kemp's ridley sea turtle. From the presentations by 7 experts on Gulf of Mexico sea turtles and recently published syntheses on trends in reproductive output (e.g., Gallaway et al. 2016a,b; Caillouet et al. 2016, 2018) it was clear that the present state of knowledge was insufficient to draw firm conclusions on the status of the Kemp's ridley population. Annual nest counts, the only index of the Kemp's ridley population, were steadily climbing prior to 2010 but continued recovery of the population has not been indicated. In fact, in the past two years large declines in nesting have been seen. Preliminary indications are that more than two times as many nests would be needed to reach the 25,000 nest benchmark that was set for downlisting. Whether this represents mortality in nesting females or reduced body condition so that fewer nests are laid is not known. Regardless, it means that reproductive output of Kemp's ridley has dropped. What will this mean for Kemp's ridley in the future? What are the implications for fishermen? Waiting to see what happens next year is not the answer. With the large drop in nesting over the past two years, even if nesting increased each of the next four years it would be nearly impossible to gauge whether this represented resumed population growth. The lack of continued growth is a concern and determining the causes should be prioritized. Despite the present uncertainty, it is also apparent that developing a mechanistic understanding of spatiotemporal variation in Kemp's ridley abundance and its role in population dynamics is within reach. We propose conducting a Kemp's ridley stock assessment to identify the principle anthropogenic and environmental drivers of Kemp's ridley population dynamics and generate mechanistic predictions of future variability and trends. Without a rigorous quantitative assessment, understanding the efficacy of recovery efforts for Kemp's ridley will be impossible. Date Entered: Sept 25, 2019		Yes	No	No	No	No	No	No		No		$ 250,000.00	$ -	
New	Research and Education	5946	11/25/2020	Gulf Coast CSET Tech Fusion - Advanced Technology Training for the 21st Century	In the new Millenia, the evolution of digital technologies has radically changed the way we live and work. This revolution has also changed the demands that citizens, businesses, and other organizations have placed on the digital society. However, the Mississippi Gulf Coast faces a severe lack of well-trained IT workers. Gulf Coast Tech Fusion will focus on developing an IT workforce for economic expansion, innovation, and societal growth. Tech Fusion will bring together a dual focus within the CSET building: (1) provide IT training and (2) provide flexible facilities to develop IT solutions for the development and implementation of regional business technology solutions. and industry. Gulf Coast Tech Fusion will provide to students requisite training in emerging technologies (e.g., Cybersecurity, Coding, Artificial Intelligence (AI), Virtual Reality (VR)/Augemented Reality (AR), and Simulation/Game Design) that could make the Gulf Coast region an international leader in the high-tech sector. This program would provide momentum to accelerate a trained IT workforce and opportunities for business and industry to upskill incumbent workers. For example, MGCCC is partnering with EON Reality to create a center of excellence for extended realities (XR); XR is an umbrella term for all immersive technologies, such as AR, VR, mixed reality (MR), and those that are still to be created. This program would help to develop the next generation of talent to develop these technologies, and it would provide support to companies to explore and develop training via XR. As for future-proofing, a push to identify a center of excellence to create AR and VR training is now critical. This would allow training to continue in spite of any external factors that may come requiring remote worker and/or social distancing. Gulf Coast Tech Fusion will be housed in the Center for Security and Emerging Technology (CSET) â€" further leveraging a BP Restore project (i.e., CSET). The CSET building received partial funding in an earlier round of BP Restore projects, so this proposal includes the request to fund the remainder of the CSET building. Operating Tech Fusion in CSET will provide Mississippi Gulf Coast Community College (MGCCC) with a platform to conduct cutting-edge IT training and develop solutions for local businesses and industry. The region must invest in equipment and infrastructure to facilitate this training, future-proof the Mississippi Gulf Coast, and better mitigate unexpected disasters in the future. Specific spaces within CSET will be used for corporate training and development, while other areas of CSET will focus on credit instruction in IT. In some areas, the training needed above may require that equipment be purchased to facilitate the training. MGCCC will create technology enhanced (aka, HyFlex) classrooms that allow for seamless synchronous communication with students/incumbent workers remotely. That is, the HyFlex classrooms will allow students and incumbent workers to remotely engage in the class and/or training. MGCCC proposes a total of $7 million dollars for the Gulf Coast Tech Fusion project. Three million dollars will fund training efforts described above, and four million will help to secure the remaining funds needed to construct the CSET building. It is the intent of MGCCC to utilize funding to provide IT training and provide flexible facilities for the development and implementation of business technology solutions on the Harrison County Campus (formerly Jefferson Davis Campus) in Gulfport, MS as the physical location. Due to the technological advances that will be located in the Center for Security and Emerging Technology (CSET), the following training programs could be offered virtually or online to students around the globe. •Cybersecurity â€" The threat of hackers, malware, and social engineering could compromise or harm information assets. In order to combat this threat, MGCCC established a robust training program for cybersecurity. The program will produce a competent workforce quickly to create an ecosystem of healthy information assurance. MGCCC revitalized their curriculum to align with the National	Harrison	Yes	No	Yes	No	Yes	No	No		Yes		$ 7,000,000.00	$ 3,000,000.00	
New	Research and Education	5947	11/25/2020	PAWS (Pets and Wildlife) Exploratorium	HSSM is seeking funds to construct a new facility on their property, which will serve as an education and community event location. Set in a nature-inspired landscape, the PAWS Exploratorium will provide an aesthetically pleasing venue at the juncture of 28th Street and Highway 49 and we will also get with the Gulf Coast Restoration Initiative to create a nature trail in conjunction with the new facility. This new area will focus on education and conservancy of all animals while also focusing on the human component of humanity-which is already at the center core of HSSM's mission and ingrained culture related to animal welfare and humanity. This facility will provide an additional mission based attraction for families to visit while being complimentary to and not competitive with surrounding aquatic organizations. The facility will feature live engaging exhibits with animals such as turtles, snakes, opossums, raccoons, etc., enhanced interactive educational opportunities, children's activities, a small Re-Tail store, various nature trails for bird watching and a pollinator path. The Exploratorium will also be open and available to other animal welfare organizations, such as Wild at Heart Rescue and Audubon MS and can be a destination for several local summer camps such as the City of Gulfport Summer Camps and Lynn Meadows Vet Camp. The facility will utilize existing HSSM land and will enhance current programs while also serving as a centrally located site for partner organizations. This new facility will perpetually support HSSM's lifesaving efforts and strive to educate the importance of animal welfare, preservation, conservation and humanitarianism. We will seek guidance from top architect consulters that have worked on tourist engaging projects in order to create an engaging and interactive experience for all attendees. The requested funds would support design and construction plus year 1 operations and encourage ongoing fundraising. HSSM plans to sustain PAWS by funneling Club Paw summer camp registration fees back into the program and by requesting parent/teacher organizations to provide a small fee for students and charge additional adult fees for each tour/education session as well as special event rental fees. Because of PAWS HWY 49 location-a major tourist access road- and its proximity to the Aquarium, we plan to partner with the Aquarium and possibly the Institute for Marine Mammal Studies to offer joint tourism tickets. In addition, we will use our extensive individual & corporate donor network as we have an established fundraising platform for our mission based initiative. We will also share trained HSSM staff with the new facility and veterinarians are already in place and could partner with local community colleges such as MGCCC for workforce training and internships. PAWS could potentially raise additional funds by hosting a snack bar that sells only local products from Pop Brothers, Karen's Cookies and other local businesses as well.	Harrison	Yes	No	Yes	Yes	Yes	No	Yes	90	Yes		$ 1,123,500.00	$ 224,700.00	
New	Research and Education	5949	11/30/2020	Impacts of changes in freshwater flow and salinity on sea turtle distribution and ecology in Mississippi Sound	The aim of this project is to restore sea turtle populations in the Gulf of Mexico through satellite tracking of sea turtles to inform habitat use changes as it relates to changes in salinity of Mississippi Sound. Loggerhead, Kemp's ridley and green sea turtles are known to occur in Mississippi Sound and changes to freshwater flow will be likely to affect the extent and composition of habitat, either by changing salinity or nutrient conditions. Such changes are likely to affect the sea turtles that forage in these habitats. It is critical to document sea turtle distribution and use of Mississippi Sound in relation to salinity, and relate this to potential ecosystem changes as a result of freshwater releases and restoration efforts.	Jackson,Hancock	Yes	No	No	No	No	No	No		No		$ 1,271,000.00	$ -	
New	Research and Education	5952	11/30/2020	Nature-based Tourism with Increased Management and Stewardship for Beach Nesting and Foraging Species	The Secret Coast or Mississippi's Gulf Coast offers a mix of recreational activities that cater to many types of visitors and locals, alike. Man-made, public beaches, in Hancock, Harrison, and Jackson County account for nearly 56% of Mississippi's coastline and provide protection to seawalls and coastal roadways such as Highway 90. These beaches draw both day and overnight visitors. A 2017 study from Longwoods International found that 27% of overnight visitors and 25% of day-trippers visited the Mississippi Coast just to enjoy the beaches, far outranking the national norm. The beaches provide many different experiences including fishing, jet-skiing, aqua cycling, and sailing for people to enjoy. Moreover, the beaches are adjacent to other amenities including continued development, casinos, shops, restaurants, bases for U.S. Armed Forces, universities, hospitals, and active ports which offer a well-rounded holiday experience. Just as these sandy oases attract visitors, they also provide essential habitat for beach-nesting and foraging species, including colonial seabirds, solitary shorebirds, and marine turtles. These species compete for space with recreational beach visitors and negotiate with sources of disturbance including aforementioned recreational activities but also naÏve actions such as children chasing birds or kite flying as well as allowing domesticated dogs off-leash which can destroy bird and turtle nests in a matter of seconds. The permitted use of personal fireworks on the beaches on July 4th can flush breeding bird species off nests, exposing eggs and chicks to the elements such as extreme heat as well as to predators. The unregulated shooting of fireworks can cause possible abandonment, while also creating a dangerous environments for people attending festivities at the beach. Additionally, beach managers need to carefully balance efforts to clean the beach, which include the mechanized removal of trash and debris for people's enjoyment, while still providing this unique habitat essential for the health of beach-dependent species as well as the beach system itself. Maintenance equipment to keep the beaches clean can crush camouflaged bird eggs or buried turtle eggs. Migrating birds depend on minimal disturbance to feed to replenish fat stores to make long hemispheric journeys each spring and fall. Abating disturbance in wildlife breeding areas can lead to increased hatching success and survival of young birds and turtles. Moreover, many of Mississippi's beach-nesting species are global migrants, and it is important to stress that actions locally can have global impacts. Management of and tourism around beach-dependent species do not have to be mutually exclusive; however, management of these species need to exist to protect resources, especially as other land uses, including recreation exist. Both around the globe and in the United States, nature-based tourism has garnered support for wildlife and habitats, but there is also increasing documentation acknowledging the need for ongoing management as well. Building upon 2019's GOMESA grant, Nature-Based Tourism with Increased Management and Stewardship for Beach-Nesting and Foraging Species, Audubon proposes a Phase II project with a goal to support nature-based tourism and increase management capacity for beach-dependent species in Coastal Mississippi. Audubon will work towards this goal by completing the following two objectives: 1) provide wildlife management capacity and stewardship support to Mississippi's coastal counties, municipal governments, and partners and 2) implement strategies to increase nature-based tourism, with a particular focus on birding. The outcomes and outputs will be varied and beneficial. Outcomes include: establishment of long-term monitoring for turtles; increased monitoring for birds; increased protection for Mississippi's birds and turtles; at least 200 school students engaged and educated about coastal systems and threats; greater business community buy-in, and continued job security for two positions funded in the initial grant. Outputs include: data coalesced and available for beach managers, county officials, and others to utilize, especially with accessing MEMA or FEMA funds after storms; at least 50 children conservation campaign signs created; a website created for tourists and locals, alike, to highlight nature-based tourism opportunities and best management actions; and a new position, Tourism Docent, created. Goal and Objectives:	Harrison,Jackson, Hancock	Yes	No	No	Yes	No	Yes	No		No		$ 330,000.00	$ -	

New	Research and Education	5955	12/3/2020	Enhanced sea turtle mortality investigations	This project will enhance NOAA's existing necropsy facility to expand sea turtle mortality and supplementary investigations, and meaningfully improve the collaboration through the in-person and remote participation of researchers and education staff in Mississippi and beyond. Data gathered from necropsies constitutes the most vital source of knowledge on mortality factors and sometimes represents the sole source of that information. Enhancements to the necropsy laboratory (e.g. AV technology for remote participation, ceiling-mounted examination lighting, floor drainage, safety upgrades, and height appropriate necropsy tables) would considerably improve the capacity of the facility to manage sea turtle necropsies in a sterile and collaborative environment. Upgrading the facility is a cost effective approach since it takes advantage of an existing structure. The modernized facility will serve as an important resource for the state Sea Turtle Stranding and Salvage Network by providing a collaborative, technologically advanced work environment for its constituent partners and organizations to conduct postmortem examinations of stranded sea turtles. This will allow for early detection of natural and anthropogenic mortality events such that mortality sources can be addressed more rapidly and solutions implemented wherever possible. In conjunction with the Backtracking Analysis and Mortality Mapping tool developed by NOAA researchers, these timely necropsies will also help to pinpoint the origins of these mortality sources. Necropsies conducted at this facility would also assist with sample collection and analyses for law enforcement cases enabling more rapid responses for these investigations. The proposed work will contribute significantly to the natural resource issue of restoring and protecting sea turtles species within Mississippi waters. The project would expand and improve the information collected on sources of sea turtle mortality in Mississippi.	Jackson	Yes	No	No	No	No	No	Yes		No		$ 150,000.00	$ -	
New	Research and Education	5971	12/8/2020	Mississippi West Indian Manatee Health Assessments and Research	NOAA Project ID# 14538: Objectives: This project is a solution based program developed to answer critical questions and provide informed data about the population, health and future of manatees in Mississippi. Work in close collaboration with Dauphin Island Sea Lab to increase Manatee research in MS using standardized methodologies. This will assist with knowledge of movement and occupancy patterns including identification of individuals, origins, seasonal dispersal and site fidelity, and functional movement modes of those individuals during a tracking period. Conduct MS annual health assessments with satellite telemetry to understand health, spatial distribution and movement. Activities to be completed: Assist the Manatee Sighting Network based at DISL in AL with MS based manatee reporting, respond to manatee sightings as needed, provide public awareness and outreach at MSAQ and collaborate on annual MS health assessments, satellite telemetry and mark-recapture. Expected outcomes: Years 2021-2025. Support MS manatee research and conduct annual health assessments. Benefits: Limited dedicated resources to manatees in Mississippi has resulted in a lack of data for natural resource managers for informed management. West Indian manatee sighting reports have grown in frequency along the nGOM since the 1980's, a region normally considered outside the species normal area of occupancy. The causes for the increase in manatee sightings remains unclear, but it suggests that the northern GOM is becoming a regular seasonal destination for manatees. This raises important questions as to what the ecological importance of the nGOM is to manatees and spatio-temporal patterns of manatee use in the region. This project would help answer these important questions. Enter Date 11/30/2020	Harrison	Yes	No	No	No	No	No	No		No		$ 1,000,000.00	$ -	
New	Research and Education	5972	12/8/2020	Long-term bottlenose dolphin monitoring, research and health for conservation management in Mississippi	NOAA Project ID# 14537: Objectives: Establish a long-term solution based program to answer critical questions and provide informed data about the population, health and future of bottlenose dolphins in the Mississippi Sound. Activities to be completed: Conduct annual dolphin health assessments, an essential conservation management tool for free ranging dolphins. However, before annual health assessments can be conducted, it is necessary to obtain consistent baseline data using mark-recapture via photo-identification to analyze movement patterns, size and structure of populations, survival rates, abundance and birth/fecundity rates and determination of site fidelity. Using consistent boat based photo ID surveys with robust statistical analysis, population and stock assessments can be ascertained. Mark-recapture, behavioral observations, acoustical recording during boat based surveys, and genetic testing of skin biopsy samples will provide answers to the unknown site fidelity of MSS dolphins. Once satisfactory baseline data on population and site fidelity is collected, plan annual capture and release health assessments of dolphins in the MS Sound. Expected outcomes: Years 2021-2025. Year-round boat based dolphin photo ID, acoustical recordings, collection, processing and genetic testing of skin biopsies. Year 2024-2025. Plan, secure permits and develop funding needs for annual dolphin health assessments. Benefits: With an unknown population of a MMPA protected species such as the bottlenose dolphin, regulators are challenged when faced with making management decisions. Without having baseline population data, it is impossible to understand the potential stock effects from man-made or natural disasters which could lead to the depletion or extinction of geographically distinct dolphin populations. The marine environment faces numerous natural and anthropogenic threats that can affect dolphin health. Dolphins specific to the MSS have had 2 unusual mortality events (UME) declared over the past 10 years (2019: freshwater intrusion; 2010-2014: oil spill) as well as being included in 10 Gulf wide UME's from 1992 â€" present (NOAA). In MS, data is lacking with regards to how environmental stressors are effecting health, reproduction and physiology of MSS dolphins. This project will help fill in critical knowledge gaps about bottlenose dolphins in the MSS to ensure the long-term health and conservation of this protected species. The work will be shared via outreach and education at MSAQ. Date Entered: Nov 30, 2020	Harrison	Yes	No	No	No	No	No	No		No		$ 3,000,000.00	$ -	
New	Research and Education	5973	12/8/2020	Barrier Island Shoreline Monitoring Using sUAS for Sea Turtle Stranding and Nesting	NOAA Project ID# 14536: Objectives: Utilize small unmanned aerial systems (sUAS) and sighting surveys to provide standardized monitoring, identify strandings, nesting frequency and site fidelity over the barrier islands of Mississippi. Increased monitoring, reporting and outreach efforts will reduce the year-to-year biases making stranding data more robust and useful for assessing recovery efforts. Develop a sea turtle nest monitoring program for Mississippi for the purposes of collecting baseline data that can be applied to a long-term conservation management plan. Activities to be completed: This project will utilize a combination of sUAS flown by licensed operators under the direction of researchers and boat based sight surveys to provide a much needed, efficient and non-invasive method for monitoring remote barrier island beaches. The footage from the drone can be viewed in real-time and most strandings and crawls can be spotted while flying at an altitude of 15-30 m. Expected outcomes: The boat based sUAS and sighting survey program will identify stranded sea turtles and sea turtle nest sites, the location will be marked with GPS and scientists will visit the sites for further analysis, processing, recovery of stranded animals. In lieu of a USFWS recovery permit, potential nest sites will not be disturbed but the location will be reported to USFWS, NPS (when applicable) and NOAA. Once a USFWS recovery permit is secured, nest sites will be staked and monitored by Mississippi based trained staff. Years 2021-2025. Conduct a combination of sUAS flights and boat based sight surveys during the stranding and nesting season (March â€" August) over Cat, Ship, Horn, Petit Bois, Deer and Round islands for sea turtle stranding and nesting activity. Benefits: This project will collect critical data about sea turtles in Mississippi so that conservation management initiatives can be developed. The research efforts and findings from this work will be used in public and educational outreach at Mississippi Aquarium and in relevant scientific publications. Date Entered: Nov 30, 2020	Jackson	Yes	No	No	No	No	No	No		No		$ 2,000,000.00	$ -	
New	Research and Education	5974	12/8/2020	Restoring Sea Turtles to the Blue and Beyond: Establishing Mississippi's preeminent, sea turtle rescue, rehabilitation, and education (RRE) center at the Mississippi Aquarium (MSAQ)	NOAA Project ID# 14535: MSAQ will be Mississippi's first and only Association of Zoos and Aquariums (AZA) accredited facility. Our goal is to build and open a state-of-the-art sea turtle rescue, rehabilitation, and education (RRE) center that serves as an epicenter of local sea turtle rescue and rehabilitation. The RRE will be a combined use resource that reaches 350,000 guests annually. Establishing the RRE center on MSAQ's main campus will allow guests to experience daily rescue and rehabilitation operations first-hand, including intake, triage, and advanced medical procedures. Once turtles are rehabilitated, community focused events will be established to engage the public in re-introductions of sea turtles to the gulf coast waters. Objective 1: Create infrastructure for a preeminent sea turtle rescue, rehabilitation, and education center in Mississippi - Provide a foundation for a scalable rehabilitation and rescue operation with dedicated and expert staff to care for stranded sea turtles - Space to rehabilitate a minimum of 30 turtles -Increase capacity to receive and rehabilitate turtles from AZA partners and established rescue and rehabilitation facilities nationwide -MSAQ's Animal Research Center (ARC) provides additional capacity for facility growth and can serve as an epicenter during emergency scenarios (environmental disasters, unusual mortality events, or mass stranding events) - Establish educational opportunities for aquarium guests, school groups, students, and community members Objective 2: Utilize RRE as ground zero for enhanced mortality investigations and provide early detection and response to anthropogenic threats and emergency events in Mississippi -RRE's impact on injured turtles will help compensate for injuries that occurred due to the Deep-Water Horizon oil spill -Increase capacity for local stranding response and allow for mortality investigations, addressing restorations outlined for sea turtles -Provide world class veterinary care to Mississippi's stranded turtles to reduce injuries and mortalities -MSAQ employees two veterinarians, both trained by sea turtle experts in medicine, biology, stranding, and rehabilitation. Both have worked at world-renowned facilities -Advanced medical capabilities: dedicated hospital, radiology equipment, surgical suite, endoscopy equipment, CT scanner, mobile necropsy unit, field and in-house laboratory and infectious disease diagnostic capacity -Collaborate with local and national stakeholders -Present and publish scientific findings -Train future scientists and educators Date Entered: Nov 30, 2020	Harrison,, Jackson, Hancock	Yes	No	No	No	No	No	Yes		No		$ 4,000,000.00	$ 600,000.00	
New	Research and Education	5976	12/8/2020	Mississippi Sound Oyster Shell Recycling Program- Phase 3	NOAA Project ID#14533:The Nature Conservancy recommends a ""Phase 3"" of the Mississippi Sound Oyster Shell Recycling Program, that was initially funded as Activity #8 in the 2018 Mississippi State Expenditure Plan. This project would continue implementation of the Oyster Shell Recycling Feasibility Plan that will be undertaken in ""Phase 2"" of the before mentioned project. Project components would include continued collection of oyster shell resources, engagement and training with restaurants, development of promotional materials, and planning and potential implementation for expansion to other geographic areas within the state. A three year time period is recommended for this proposal as it would allow for a robust set of data and the establishment of self-sustaining funding streams. It is strongly recommended that this project be implemented with stakeholder input in the form of a program advisory team, that has representation from relevant economic and conservation business sectors. This program will support the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region through the collection and utilization of discarded oyster shells for oyster cultch placement in the Mississippi Sound. Additionally, this proposal will continue to add data in support of the economic sustainability analysis that will be completed in ""Phase 1"". Oyster populations and subsequent harvests have decreased over time throughout the Gulf of Mexico as well as in the Mississippi Sound. There are several reasons scientists and managers have hypothesized to the lack of oyster populations including overharvesting, natural and anthropogenic disasters, water quality, as well as a reduction in oyster reef habitat. Oyster reef habitat is comprised of cultch. Cultch is a hard substrate often made up of oyster hash, shell, and other hard bottom features on which oyster larvae can attach. Managers often supplement the availability of hard substrates with additional cultch materials including limestone, crushed concrete, fossilized oyster shells, and oyster shells when available. Based on best available science, as well as anecdotal information from oyster fisherman, oyster shell is the best cultch material to use to maximize oyster larvae adherence and recruitment. However, oyster shell is a limited resource and expensive to procure. Oyster shell recycling programs have been implemented throughout the coastal United States in an effort to reuse discarded oyster shells from restaurants, festivals, and other venues. The program objective is to avoid discarding oyster shells by collecting them from these venues and reusing them as cultch material for oyster reefs in the future. However, all oyster shell recycling programs from Maryland to Louisiana have to consider mechanisms to ensure that the program can be sustainable after an initial start-up period. Thus, it's imperative to conduct an economic sustainability analysis that will determine the potential number of shells available for re-use across the spectrum of sources in the area, evaluate costs of hauling, storing, and deploying shell, and inform the economics of the program for viability and sustainability. Date Entered Nov 30, 2020	Harrison	Yes	No	No	No	No	No	No		No		$ 650,000.00	$ -	

New	Research and Education	5985	6/4/2021	Enhance conservation of bottlenose dolphins in Mississippi state waters by strengthening capacity for science-based marine mammal health and management	The Mississippi Sound (MSS) is home to the nation's largest bay, sound, and estuarine (BSE) population of common bottlenose dolphins (Tursiops truncatus). The MSS serves as a nursery ground for newborn dolphin calves in the spring and summer months and provides vital foraging habitat for dolphins year-round. As a top predator, dolphins are an important sentinel species for the ecosystem. In addition, the fertile waters of the MSS also support a large recreational and commercial fishing industry and an oyster industry. The MSS is heavily impacted by freshwater inputs from large watersheds such as the Mississippi River, Pearl River, and Pascagoula River. In particular, the 2019 openings of the Bonnet Carré Spillway introduced a substantial amount of freshwater from the Mississippi River into the Mississippi Sound, which is not normally exposed or connected to this riverine system. During this year, dolphin mortalities increased by more than three times over the yearly average from 2014-2018. Other large ecological disasters such as the Deepwater Horizon (DWH) oil spill, hurricanes, and algal blooms also affect dolphins. Therefore, effective management of dolphin health in the MSS is critical for the viability of this important species in the Gulf of Mexico, and it requires science-based decision making and interventions from experienced and qualified experts to manage this resource in the context of the economically vital MSS. To effectively and sustainably manage this vital species in the MSS over the next ten years, Mississippi State University College of Veterinary Medicine (MSU-CVM) and the Institute for Marine Mammal Studies (IMMS) have developed a comprehensive, science-based plan with the following objectives: 1) Determine the threats to dolphin health, including human interactions, in the MSS that result in strandings and mortalities. 2) Assess the environmental threats affecting dolphins and their habitat, particularly changes to water quality and salinity, pollutants, and prey availability in the natural habitats of dolphins in the MSS. 3) Estimate the abundance and distribution of the dolphin population in the MSS using line-transect methodology for stock assessments. 4) Evaluate the degree of connectivity and boundaries of the dolphin population in the MSS using photo identification to determine habitat use, site fidelity of individuals and groups within the MSS, as well as determine their movements in response to changes, including salinity. 5) Provide education and increase outreach to build capacity in Mississippi for effective management of dolphins in the MSS. By providing outreach for K-12 students and the public, and by conducting hands-on specialized education for veterinary students and undergraduate students, MSU-CVM and IMMS will build capacity in Mississippi to enable future expertise to manage the state's coastal resources. The objectives of this plan align with state and federal agency priorities. Furthermore, MSU-CVM and IMMS have experience and a track record of productivity in all the proposed activities. We anticipate that, through conducting this comprehensive set of aims from 2021-2030, the bottlenose dolphin population in the MSS will be effectively monitored and managed to establish their sustainable, long-term health. We further expect that, through the knowledge gained in this proposed program, the MSS bottlenose dolphins will be the most well-documented population in the Gulf of Mexico, and Mississippi will become a model state for effective management of its wild marine mammal stocks.	Harrison	Yes	No	No	No	No	Yes	No		No		$ -	$ -	
New	Research and Education	5986	6/17/2021	Enhance conservation of sea turtles in Mississippi state waters by strengthening capacity for science-based animal health and management	The Mississippi Sound (MSS) is home to the most critically endangered sea turtle in the world, the Kemp's ridley (Lepidochelys kempii), along with other endangered or threatened sea turtle species such as the loggerhead (Caretta caretta) and the green sea turtle (Chelonia mydas). Juvenile Kemp's ridley sea turtles utilize the MSS for development, foraging on blue crabs that are abundant in the MSS. The green sea turtle, omnivorous at the juvenile stage, forages on sea grass beds and fish prey in this area. Loggerhead sea turtles have been documented to nest on Mississippi beaches from as early as 1990 (Hoggard 1991). In addition, the fertile waters of the MSS support a large recreational and commercial fishing industry as well as an oyster industry. The MSS is heavily impacted by freshwater inputs from large watersheds such as the Mississippi River, Pearl River, and Pascagoula River, by large ecological disasters such as the Deepwater Horizon (DWH) oil spill, and by natural events such as hurricanes and algal blooms. Therefore, effective management of turtle health in the MSS is critical for the viability of these important species in the Gulf of Mexico, and it requires science-based decision making and interventions from experienced and qualified experts to manage this resource in the context of the economically vital MSS. To manage this vital species effectively and sustainably in the MSS over the next ten years, MSU-CVM and IMMS have developed a comprehensive plan with the following objectives: 1) Conduct stranding response/rehabilitation and implement a systematic approach to identify threats to sea turtle health, including human interactions, in the MSS. This includes providing timely response to incidentally captured, stranded, and injured turtles on the Mississippi coast and a systematic approach to determining cause of death. 2) Assess the environmental threats impacting sea turtles and their habitat, including investigating changes to noise pollution, water quality, and pollutants in the habitats of turtles in the MSS. 3) Evaluate turtle movements, distribution, and habitat utilization using satellite tagging and fecal analysis. 4) Survey, document, and manage any sea turtle nesting activity on Mississippi mainland beaches. 5) Provide educational opportunities for students and conduct outreach to build capacity in Mississippi for management of sea turtles. Specialized, experiential education will be provided for veterinary students, as well as undergraduates and graduate students, to build expertise in Mississippi for coastal management, and outreach will be enhanced for K-12 students and the public to improve public awareness. We anticipate that, through conducting this comprehensive set of aims from 2021-2030, the sea turtle population in the MSS will be effectively monitored and managed to establish their sustainable, long-term health. We further expect that, through the knowledge gained in this proposed program, the MSS turtles will be the most well-documented population in the Gulf of Mexico, and Mississippi will become a model state for effective management of its wild turtle stocks.	Harrison	Yes	No	No	No	No	Yes	No		No		$ -	$ -	
New	Research and Education	5993	7/20/2021	Jackson County Septic System Abatement Project - Phase 2	Extension of sewer collection systems to underserved areas of Jackson County including Vancleave, Hurley, Three Rivers, & Helena Areas while allowing for the conversion of approximately 900 residences from on-lot septic systems to public systems at no cost to the resident. Converted on-lot systems would be owned and maintained by JCUA.	Jackson	Yes	Yes	No	Yes	No	No	Yes	100	Yes		$ 4,500,000.00	$ -	

UNFUNDED PORTAL PROJECTS (WHITE CELLS)

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Workforce Development	53	10/24/2013	Seafood Receiving,Processing, and Distribution Dock	The proposed location for this Working Waterfront Seafood Receiving, Processing, and Distribution Dock is the site of the former Gulf City Fisheries which is located on the east side of the Pascagoula River just north of the Highway 90 bridge. This facility will provide a one-stop, short-term and long term mooring, unloading, ice and fuel service as well as value added processing which occurred at this location from the the late 1950's to the 1990's. This is a sincere effort to revitalize the local commercial fishing fleet which has been at-risk since Hurricane Katrina and further negatively impacted by the BP oil spill. A thorough hard copy of this proposed project has been forwarded to MDEQ Director Ms. Trudy Fisher. Thank you, Bruce W. Maghan	Jackson	Yes	Yes	Yes		Yes	No	Yes	Yes	Yes		$ 4,881,792.00	$ -	
	Workforce Development	89	10/29/2013	Gulf Coast Prescribed Fire Cooperative	Thousands of acres of private and public longleaf pine forests, savannas and coastal marshes within the three coastal counties are in need of management activities including prescribed burning and exotic plant control to restore habitats of native wildlife and plants and also to increase values of privately-owned forest lands for recreational use and forest products. This program will establish an organization of professional fire practitioners to apply fire as a science based management tool on private and public wildlands adjacent to or in close proximity to established core conservation areas. All burn teams will be trained to National Wildfire Coordinating Group (NWCG) standards. Each team includes the following staffing and equipment: type-2 prescribed fire burn boss; type-3 tractor plow or tracked engine with operator, one type-6 engine with engine boss and three type-1 firefighters. Based on funding, a maximum of three teams will be established. Teams may work independently or in conjunction with each other or with established fire crews from local, state and federal agencies to apply prescribed fire on approved public and private lands. Team members will be available to make presentations concerning the benefits of prescribed fire to school and civic groups and to provide fire management training to local landowners and firefighters. When not engaged with prescribed fire-related activity, teams will engage with other land management needs: monitoring results of prescribed fire projects; conducting fuel reduction and invasive species control; monitoring, mapping and maintaining public access and nature trails; and prescribed fire education projects. Teams will be supervised by a Field Coordinator (professional fire manager) who will oversee safety, training, work assignments, planning and coordinating with local partners and cooperators.	Hancock H	Yes	Yes	No		Yes	Yes	No	No	Yes		$ 25,120,000.00	$ -	
	Workforce Development	1164	7/8/2013	D'Iberville Working Waterfront & Commercial Seafood Harbor	(ORIGINAL ID#12018) 1) The idea of a working waterfront for the seafood industry in D?Iberville is not new. In fact, the City has tried for over 20 years to raise sufficient money to expand the current harbor limited to the space underneath the I-110 Bridge. The City has tried to negotiate leases with bay front property owners to no avail. The City has prepared several plans over the years to construct a working waterfront harbor but funds to acquire shoreline properties have not been available. The commercial harbor is part of the overall plan to revitalize the downtown one block north linked with the French Market one block north. The City has Tidelands funds that would be leveraged to effectuate land purchases and then on to construction of the harbor. The attached summary provides an overview of the project and how well it fits the Seafood Industry portion of the GoCoast 2020 report. Approximately 10 acres of property is needed to accommodate waterside and landside needs. Wetland restoration on both sides of the existing harbor is planned. The working waterfront is a key component of the City's downtown revitalization plan. In conjunction with existing Tidelands Funds, land and development costs are estimated to be$8.5M	Harrison	Yes	Yes	Yes		Yes	No	Yes	Yes	No		$ 8,500,000.00	########	
	Workforce Development	1255	12/3/2013	Gulf Observing Aerial Program	A diverse constellation of airships, airplanes, and UAVs should be put in place to provide long endurance observation of the Gulf. The primary purpose of the aerial fleet will be to closely monitor the offshore drilling community to immediately detect any oil spills, washed ashore oil deposits, or environmental damage to sea life, coastal marshes, etc. Additional functions of the aerial observing system would include maintaining cellular communications service during and after hurricanes, helping find disabled boats, tracking contraband vessels and airplanes, and other functions/capabilities of benefit to the public. MAC proposes to assemble a team of subcontractors that will provide the aerial platforms, provide maintenance and mission support, and operate from the Stennis International Airport, in Hancock County, Mississippi. MAC is proposing a "Mississippi Centric" team that will include the Mississippi Divisions of Lockheed Martin, Stark Aerospace, Northrop Grumman, Aurora Aerospace, Nvision, Optech, and others. MAC will prepare the overall plan, have constructed one of the world's largest hangars, procure the necessary aerial platforms and ground support equipment, and operate the system for the first seven years, at which time the MDEQ will call for proposals for an operational contractor for the second seven year period.	Hancock, H	Yes	No	Yes		Yes	Yes	No	No	No		############	$ -	
	Workforce Development	1259	12/3/2013	Ocean Springs YMCA Expansion/Renovation Plan	The Mississippi Gulf Coast YMCA located in Ocean Springs and Tradition serves the entire Gulf Coast region with our facilities and outreach programs. The 7,000+ members between our two branches have access to fitness equipment, group exercise classes, recreational and fitness activities in the pool, child watch, social and family activities, wellness programs, and corporate membership benefits. We are able to extend our reach to promote healthy communities through our after-school programs, career engagement programs, evidence-based chronic disease prevention programs, and water safety programs. The Mississippi Gulf Coast YMCA serves over 10,000 participants annually with 5,000 of those being under the age of 18. In the last 5 years, the Mississippi Gulf Coast YMCA has provided over $500,000 in free and subsidized programs to youth, families, and seniors seeking health and community. In order to have a greater impact to families and businesses on the Gulf Coast, the Mississippi Gulf Coast YMCA is proposing the renovation of the Herbert Wilson Community Center in Gulfport into a new facility. With this additional facility, the YMCA would be able to offer a family-based fitness facility convenient to residents and businesses in the area. (This would allow us tackle the health and social needs that affect the area including diabetes, hypertension, youth obesity, and arthritis with our chronic disease prevention programs, youth engagement, and after-school and camp programs.) The facility would benefit local employees through our corporate membership benefits program to provide employee wellness through membership at the Y. We assist employees and their families in managing their total health and well being through a variety of services such as adult and childrenâ€™s land and water-based fitness classes, reduced programming fees and other family-oriented activities and special events. In the 2017 County Health Rankings, Harrison County is ranked 24th while neighboring counties, Jackson and Hancock, are ranked 8th and 6th respectively. A local YMCA provides access to exercise opportunities, chronic disease prevention programs, youth programs, and social opportunities â€“ all areas that can improve the overall social and physical health of residents thus, improving the local health ranking. A new facility will not only serve Gulfport and Harrison County but will impact the quality of life in all surrounding areas including all 7 coastal counties in our service area. Having an additional facility can increase the number of these programs by increasing awareness of the programs to individuals, schools, and employers. Gulfport is a centrally located area along the coast that also brings coastal residents who may not reside there to the area for work. These outreach programs include programs to improve physical and social health as well as youth development.	Jackson	Yes	No	Yes		No	Yes	No	No	Yes		$ -	$ -	
	Workforce Development	1273	12/9/2013	Adaptive Sports Program	"If they dream about it, they can do it!" Provide a means for all people to enjoy inlet waterways and adapt multi-use facility to accommodate mobility impaired citizens and wounded warriors. -New and existing multi-use facilities need to be built or added to for accommodating mobility impaired citizens and wounded warriors. To enable Disability Community options enhancements of family Orientated Recreational Activities /Educational/Stewardship programs for all ages or even physically unconditioned Citizens	Hancock, H	Yes	No	Yes		Yes	Yes	No	No	Yes		$ -	$ -	

	Workforce Development	1741	6/1/2014	MS Gulf Coast Environmental Educational Collaborative	Coast Ecosystem Education and Training Collaborative (CEETC) The Oil Spill has further exacerbated the gap between disadvantaged minorities (African-Americans, Hispanic, Vietnamese and low income whites) and available education funding, job loss and access to marine vessels for education. The Mississippi Gulf Coast includes approximately 70 miles of coastline plus numerous bays, estuaries and navigable rivers. Not only does this ecosystem support a diversity of marine life and habitats, but our coastal waters support an economy that generates nearly $146 million each year. Unfortunately, although the Coastal Counties (Hancock, Harrison, and Jackson) have an abundance of diverse ecosystems, recreational opportunities, and marine life education minority children rarely get the chance to experience any of this richness. It is the goal of CEETC to connect under-served children from Hancock, Harrison, and Jackson counties (to include African Americans, Hispanics and Vietnamese but not limited to) with their habitat through our hands-on and feet-wet adventures. Connecting our youth to the outdoors will offer a learning experience that has been previously accessible only to the more affluent, as well as open doors to career opportunities in the fishing industry, marine biology, conservation, and eco-science in general. The CEETC project will be a multi-year (4 years) year-round and ongoing ecosystem,environmental, educational and recreational project designed to educate coastal youth in the area of marine life studies, in addition to the aforementioned. All of the environmental education programs will be in partnership with the eight (8) school districts in the three (3) county area along the Mississippi Gulf Coast and each school district's science/marine biology courses. All of the educational programs will also be in partnership with the Mississippi Gulf Coast Community College Marine Biology Dept. The marine life studies program will through some classroom, water safety classes (swimming and water survival), marine field trips, and practical experience provide instruction on the general ecology, habitats, vegetation types, wildlife and conservation issues of Coastal Mississippi. Other activities include, but are not limited to: the environmental and health hazards of marine debris, water and shore cleanups in conjunction with state environmental agencies to educate and certify young adults to work in environmental hazardous spills, study and observation of marine wildlife, laboratory investigations, marine arts and crafts, fishing, fish identifications, insects and vegetation in our ecosystem, and an introduction to the micro-organisms in our water. This education will include aquatic life, tributaries, and basins connected to the Gulf.	Hancock, I	Yes	Yes	No		Yes	Yes	No	No	No		$ 750,000.00	$ -	
	Workforce Development	1764	2/24/2014	Medical Monitoring Program of Coastal Mississippians	This Request for Funding should be granted because it is one of the few proposals submitted for consideration which seeks to achieve several of the specific goals and objectives originally sought to be addressed by the Trustees of the BP Restoration Fund. The Proposal that follows will sever to promote proactive environmental and cultural stewardship, education and outreach based on the gathering of real time data outlining how and to what extent, if at all, the substance released during the BO oil spill and the agents used to disperse the same has or will impact and/or affect the health of those persons living within the three-county, Mississippi Gulf Coast, area of South Mississippi who were directly or indirectly exposed to the released substance and/or the agents used to disperse the release substance. Form strictly an educational point of view, data will be gathered and disseminated to the MDEQ, EPA, DOI, CDC, Mississippi State Board of Public Health and any other regulatory bodies whose jurisdiction requires notification should there be evidence of any type of alarming trend related to a claimed exposure. Additionally, by capturing such data this will allow us to measure the human toll, if any, proximately related to the exposure to the substance and to identify the proper medical or treatment plans of care that produces the best and most expeditious outcomes. having such information at our disposal will better equip our nation and more specifically the State of Mississippi and the entire Gulf Coast Region with the knowledge to properly respond to similar spills and/or release in the future. Another anticipated byproduct of implementation herein of the proposed medical monitoring system will be a healthier South Mississippi. Through the use and implementation of preventive healthcare techniques, physician led and sponsored encouragement, proactive and preventative healthcare maintenance, it is believed that recreational prowessness among many who live within the three-county Mississippi Gulf Coast area will become the watch-word of the day and we will see individuals who will begin to strive to attain and live a more healthy lifestyle. Finally, funding of this request will have a specific intangible benefit of increasing the public's confidence that an independent group of healthcare professionals are monitoring the potential health effects of the oil spill as it relates to South Mississippians who may have been exposed to the same, either directly or indirectly, and that such group of diverse professionals are positioned to disseminate accurate and unbiased information. This will help to dispel much of the misinformation that has been disseminated by parties on every side of this controversy.	Hancock, I	Yes	Yes	Yes	27.6	Yes	Yes	No	No	Yes		$ 14,121,000.00	$ -	
	Workforce Development	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kempâ€™s Ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kempâ€™s ridley sea turtles are a Critically Endangered species that relies heavily on the north-central Gulf of Mexico for developmental habitat for foraging juveniles and sub-adults. Since 2010, more than 800 sea turtles, mostly immature Kempâ€™s ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kempâ€™s ridleys have been incidentally hooked at local fishing piers in Mississippi. A variety of factors are likely responsible for increased strandings including degradation of natural oyster reefs and subsequent declines in abundance of essential prey items of the species that rely on these habitats. Declared failures of both oyster and blue crab fisheries in recent years support this hypothesis and illuminate the importance of a healthy ecosystem for recovering populations of Kempâ€™s ridleys. The purpose of this project is to facilitate the recovery of Kempâ€™s ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kempâ€™s ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kempâ€™s ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kempâ€™s ridleys and their prey, will promote the restoration and recovery of Kempâ€™s ridley prey species, and could potentially promote development of new economic opportunities associated with stock enhancement. Recent research led by IMMS has revealed that the Mississippi Sound is a vital developmental habitat for Kempâ€™s ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kempâ€™s ridleys has indicated the importance of these areas for developing sea turtles. To promote the restoration and recovery of this endangered species, continued monitoring of its important habitats and prey and enhancement of local stocks of prey items is essential. Ultimately, this work is will play an important role in both ecosystem and economic restoration of the north-central Gulf of Mexico.	Hancock, I	Yes	Yes	Yes	60	No	Yes	Yes	No	No		$ 18,000,000.00	$ -	
	Workforce Development	1833	5/14/2014	Center for Plankton Taxonomy and Research	: Ichthyoplankton and zooplankton surveys provide critical information needed to assess changes in our marine ecosystems due to 1) anthropogenic perturbations, such as the Deepwater Horizon oil spill; 2) climate change; 3) biodiversity loss; 4) the top-down effects on marine food chains from over-fishing; and 5) the reduction of recruitment success for a growing number of fish stocks. These data are being used increasingly as â€œhealthâ€Indicators for ecosystems and fishery stocks, yet research is severely limited by the lack of taxonomic expertise needed to identify fish eggs, fish larvae, and zooplankton. Large plankton survey programs operated by many NOAA Fisheries Centers currently use international fisheries agreements to facilitate the sorting and identification of their plankton samples. Our proposal recognizes the growing need for taxonomic expertise in this area, and establishes a Mississippi-based, Center for Plankton Taxonomy and Research. The overall goal of this center is to provide scientific and technical services for the analysis of plankton samples, including 1) sample sorting; 2) microscopic examination, identification and measurement of planktonic organisms; 3) molecular identification of fish eggs, early larval stages, and other plankton; 4) digital identification, measurement, enumeration and archiving of samples using advanced technologies, such as Zooscan, benchtop video plankton recorders, and flowcams; 5) trophic analyses using gut content examinations and stable isotopes; and 6) other related services as dictated by the clients. This center would support scientific and restoration efforts throughout the Gulf of Mexico region (and beyond), and serve as a resource for government agencies and academic institutions that face common research limitations. In doing so, this facility will establish an international reputation as a center for taxonomic excellence in plankton studies, and will be instrumental in training the next generation of marine taxonomists. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $9,420,000 (3 years) Annual Operation & Maintenance Cost (# years): $3,350,000/year (3 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The proposed center (a joint effort by USM's Dept. of Coastal Sciences and Dept. of Marine Science) fulfills multiple RESTORE and GoCoast priorities by building local expertise, creating partnerships, jobs and economic opportunities, facilitating ecosystem-based management, and promoting research and education initiatives. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This proposal provides a large economic stimulus to the region, and includes many opportunities for both short-term employment (e.g., design, surveying, preparation, and construction of a state-of-the-art	Jackson	Yes	No	Yes	80	Yes	No	No	No	No		$ 12,770,000.00	$ -	

	Workforce Development	1849	5/28/2014	Red snapper stock enhancement in support of the recreational fishery of Mississippi	Brief description of activities: GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species for enhancing native populations. GCRL is now poised to develop and apply new marine aquaculture technologies for red snapper in support of coastal restoration, economic expansion, and fishery stock enhancement. Red snapper is one of the most sought-after recreational fish. Reduced federal quotas have significantly impaired profitability of the recreational for-hire industry, with economic impacts throughout much of the tourism sector of the Gulf coast. GCRL is at the forefront of developing intensive recirculating aquaculture of red snapper for stock enhancement. In fact, GCRL is the only institution in the world doing so. Accomplishments include release of over 5,000 juveniles in 2013 in support of rebuilding red snapper populations; and development of copepod production technologies for feeding red snapper larvae. Building on those successes, GCRL is poised to increase production of red snapper in 2013 â€" 2014. Estimates based on NMFS SEDAR assessment growth and mortality schedules for red snapper indicate that the release of about 350,000 red snapper at 6-cm size (about 0.5 years old) would produce enough legal size fish (16 inches) in three years to double the 2012 landings recorded for Mississippi recreational fishermen. The GCRL aquaculture program has the capacity to achieve this level of production with improvements in culture technology. In 2011 (last year of NMFS data), Mississippi saltwater anglers spent $149 million in taking over 1.6 million angler trips in the three coastal counties. Thus, the recreational fishery is an important source of tourism dollars for the coastal counties and red snapper is an important draw encouraging anglers to the coast. Doubling the landings would add significantly to the tourism value of this sector. This project would focus on that goal. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 per year with a minimal duration of 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Thad Cochran Marine Aquaculture Center at GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species. The $30 million investment by federal and state partners in the nearly 100,000 sq. ft. of research and development facilities provides state of the art facilities. DMR has been a strong supporter and funder of aquaculture through the Tidelands program. This support is anticipated to continue to provide the basic research to support this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishery of Mississippi is an important component of coastal tourism. This	Jackson	Yes	No	No		Yes	Yes	Yes	No	No		$ 10,000,000.00	$ -		
	Workforce Development	1855	6/3/2014	: Development of a recreational fishery initiative within SCeMFIS (Science Center for Marine Fisheries)	Brief description of activities: The Science Center for Marine Fisheries (SCeMFIS) is a National Science Foundation (NSF) Industry & University Cooperative Research Center (I/UCRC) housed at GCRL which provides academic resources to fishing businesses throughout the Gulf coast. I/UCRC centers are designed by NSF to provide the opportunity for the business community to obtain access to academic science to fulfill their needs. The mission of SCeMFIS is to utilize academic, recreational, and commercial fisheries resources to address urgent scientific problems limiting sustainable fisheries. SCeMFIS is a unique entity because it seeks to simultaneously achieve the goals of sustainable fish and shellfish stocks and sustainable fish and shellfish fisheries. The attainment of these dual goals of sustainable fish stocks and sustainable fishing industries requires a dual focus on (a) the assessment process that determines the status of the stock and (b) the regulatory process that provides the vehicle by which the fishery is managed to optimize stock status while supporting a robust industry. SCeMFIS is unique in being the only federal-industry partnership in fisheries science today that permits the fishing industry to retain a leadership role in designing the science program. This critical attribute assures that the goal of sustainable fisheries will remain a strong component of project design. More information on SCeMFIS is available on its website: http://www.SCeMFIS.org At present the recreational fishing industry is not represented in SCeMFIS because their organizations have not routinely been involved in the assessment process at the level that SCeMFIS intends to participate. Nevertheless, their needs are great â€" witness the disastrous state of the red snapper recreational fishery. This project will permit the recreational fishery to participate in SCeMFIS without the necessity of justifying a large financial commitment to their members, thereby permitting the recreational groups to get involved in the assessment initiatives that SCeMFIS will undertake. It is anticipated that once the value of the center is made clear through their participation, that the recreational groups will continue to participate using funds raised by them from their membership. The project will provide the opportunity for two for-hire groups and two private boat groups to participate for 4 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $100,.000 yearly for 4 years: total $400,000 How will this leverage with other RESTORE priority areas or non-RESTORE funds? NSF will fund SCeMFIS at $175,000 per year. The total SCeMFIS budget this year is about $500,000. SCeMFIS anticipates that this funding level will increase. In addition, SCeMFIS can apply for additional NSF funding to support specific initiatives and for funds to train undergraduates, graduate students, and returning military personnel.	Jackson	Yes	No	No		Yes	Yes	Yes	No	No		$ 400,000.00	$ -		
	Workforce Development	1874	6/21/2014	COASTAL WATER GUARDIANS (an Education, Intern & Apprenticeship project)	This project involves education, research and internship opportunities for coastal high school, college and university scholars. For those enrolled in marine education programs, this would incorporate "hands on" opportunities. During the planning process, meetings will be held with coastal high schools and institutions of higher learning along the coast to determine how to incorporate the project in curriculum and to gain project approval from state and local educational authorities. The proposal includes Harrison, Hancock and Jackson counties. The project provides workforce development opportunities for low-income participants through apprenticeships. Stipends will be provided to learn the skills necessary to play an active role in the restoration and healthy sustainability of natural habitat and coastal waters. Many coastal residents still desire maritime occupations. Unfortunately, for the past several decades, such opportunities have become rare. This program would re-ignite such prospects and create opportunities to learn skills that could enhance employment opportunities, spur economic development, and sustain families along the coast. We should, and must provide an EQUAL OPPORTUNITY restoration, one that ensures ALL RESIDENTS a chance to benefit from the experience and knowledge gained through the recovery and restoration process. If restoration is to be preserved and maintained far into the future,it is imperative that our youth and young adults be educated and prepared to assume this task. Participation can begin as early as the 9th grade for students enrolled in Marine Biology or similar classes. Students enrolled in colleges or universities with Marine Biology classes and/or majors would also be eligible. Youth and young adults are the future stewards and keepers of our land, waters and other natural resources. Summer internships will include stipends to reward student success and provide economic relief. The component will also ease the school to work transition. Upon project approval, Visions of Hope would like to commence formal planning as soon as possible and arrange meetings to initiate the partnership agreement process. The organization''s overall role in this project would include, but is not limited to: COORDINATOR - arrange/coordinate meetings necessary for planning, implementation and monitoring; secure partnership agreements with the various educational and other entities; gather/maintain/disseminate statistical data OUTREACH - disseminate information regarding the project; aid in securing program participants	Harrison, J	Yes	Yes	No		Yes	Yes	No	No	No		$ 250,000.00	$ -		
	Workforce Development	2073	7/8/2014	Small and Medium Business Entrepreneurship Training	Gulf Coast Business Partners will conduct 12 weeks of basic business training to small business along the MS Gulf Coast. The training will equip the small business person with the basic needs to sustain and grow their business. In addition to training participants will be matched will be matched with mentors. Gulf Coast Business Partners believes that strong partnership will encourage four strategic activities.. Training, Mentoring, Advocacy and Access to Capital...in order to walk alongside small and medium enterprise owners. Overemphasizing one activity or neglecting another makes for an unbalanced approach to sustaining and growth of business development.	Hancock, H	Yes	No	No		Yes	Yes	No	Yes	No		$ -	$ -		

	Workforce Development	2075	7/18/2014	MS Observing and Modeling Restoration Network (MSOMRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Hancock, I	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 47,000,000.00	$ -		
	Workforce Development	2076	7/23/2014	MS Living Marine Resources Restoration Network (MSLMRRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Mobile, Ha	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 49,000,000.00	$ -		
	Workforce Development	2085	7/30/2014	MS Habitat Characterization Restoration Network (MSHCRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Harrison, I	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 19,000,000.00	$ -		

	Workforce Development	2086	7/30/2014	MS Indicators of Stress Restoration Network (MSISRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Hancock, 1	Yes	Yes	Yes	20	Yes	Yes	Yes	Yes	Yes		$ 7,000,000.00	$ -	
	Workforce Development	2128	9/25/2014	Impact of Suspended Sediment, Water Circulation, and Waves on Marshes and Oyster Beds	We propose to deploy four moorings equipped with a downward looking RDI WorkHorse Sentinel ADCP to measure the currents, Reynold stresses, and suspended sediment concentration (SSC), a Valeport MIDAS DWR Directional Wave Recorder, and four Sondes YSI 6600EDS to measure various parameters such as temperature, dissolved oxygen, salinity, turbidity, and chlorophyll at different depths. The moorings will be deployed for two years. They are placed at four locations for one year and then moved to another four locations for the second year. Guidance for these choices of mooring locations will be gained through application of the SWAN wave prediction model. The moorings will be placed near oyster reefs and/or marshes, preferably in water depths of at least 2 m. We plan to deploy moorings at healthy reefs or marshes and at unhealthy reefs or eroding marshes. Whether we choose reefs or marshes may depend on recommendations from the RESTORE council. If our mooring locations overlap with the moorings that are part of the â€œMississippi Coastal Observing and Prediction Networkâ€ also submitted to the RESTORE council, we will consolidate instruments to reduce costs. To calibrate the SSC ADCP measurements, we will perform monthly surveys at each mooring. These cruises will also be used to maintain the moorings and replace the battery packs. We will measure conductivity and temperature with a lowered CTD and take water samples at various depths. The SSC in these water samples is measured using a filtration system. In addition we will collect bottom sediment cores during each survey to measure the grain size distribution and sediment properties in order to determine the critical shear stress needed for sediment resuspension. The currents recorded with the ADCP and the orbital velocities estimated from the wave heights will indicate how often these critical shear stresses are exceeded, and provide insight into the active governing processes. The sediment distribution, shear stress and moored time series gathered as part of this project will all be leveraged by the modeling efforts submitted separately to the RESTORE council as â€œThe Influence of River Plumes, Hurricanes and Storm Fronts on the Hydrodynamics of the Mississippi Bightâ€in that suite of model-driven investigations, coastal erosion and oyster bed viability were not focal points, so within this proposal our ROMS model implementation for MS will be expanded to handle wetting and drying (Warner et al., 2013), as well as wind-wave coupling and the sediment transport capabilities of the ROMS-based Coupled-Ocean-Atmosphere-Wave-Sediment Transport (COAWST) model system (Warner et al., 2010). The comprehensive set of in situ measurements will provide a rich data set that reveals key mechanisms associated with sediment loading within the MS, which will inform the development and validation of this near-shore model. With validated erosion and	Harrison, 1	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes		$ 1,640,000.00	$ -	
	Workforce Development	2129	9/26/2014	Quantifying Water Quality Using Remote Sensing for the Gulf of Mexico	Since this project is Gulf wide, was interested in being considered for Council funding; however, just implementing same proposal in MS waters would be a great benefit to DMR and DEQ's day to day operations. The proposed effort will address the RESTORE Council priority area â€œWater quality monitoring and improvement.â€The project will focus on establishing a time series (2013 â€“ 2017) of satellite-based water quality products with improved spatial and temporal coverage. Water quality improvements to be achieved include detecting and monitoring: a) coastal river and land discharge points and impacts to estuarine systems; b) spread and dissipation of point source discharges; and c) tracking water quality changes from river discharge. The project will provide for the efficient and effective direction of public resources for the purposes of protecting public and environmental health. Present water quality monitoring programs are limited in the spatial and temporal coverage and cannot rapidly address if abnormal water conditions are occurring. By combining with daily satellite properties this will be remedied and enable rapid assessment of atypical water quality evident with enhanced spatial extent. Decision makers will be provided a capability to respond rapidly and send sampling collection and clean up actions. By continually satellite monitoring the impact of cleanup activities can be confirmed that water quality has returned to normal conditions. Outcome from this project will be improved water quality management in areas along the gulf coast. Decision makers in each stateâ€™s environmental quality agency will have access to an automated web based decision aid that uses real-time satellite data with automated algorithms based in Best Available Science to facilitate critical decisions based on timely and accurate information. Please see detail proposal with description, benefits, and tentative Partners-- Proposal is scalable from just MS waters to the entire Gulf of Mexico.	Harrison, 1	Yes	Yes	Yes	20	Yes	Yes	Yes	No	Yes		$ 12,000,000.00	$ -	
	Workforce Development	2133	10/1/2014	Surface Currents and Wave Monitoring for the Gulf of Mexico	The U.S. Gulf Coast is vulnerable to a variety of risks, including oil/contaminant spills, harmful algal blooms (HABs) and Vibrio, hurricanes, coastal land loss, and navigation accidents. Near real-time information on coastal ocean surface currents, waves and winds are an important element of a coastal ocean observing system necessary for mitigating these risks and for protecting public health and safety, emergency response, the coastal economy and sustainable use of coastal resources. This environmental intelligence, which can be gained through a system of coastal High-Frequency Radar (HFR) stations, can, for example: (1) Improve monitoring of restoration projects (sediment transport, water quality), (2) Help track spilled contaminants and Harmful Algal Blooms to protect public health, water quality, and critical habitats, (3) Help ensure safe commercial and recreational navigation, (4) Enhance search and rescue efforts, (5) Improve ocean and weather forecast models, including those for storm surge, (6) Enhance public beach safety through the forecasting rip currents, and (7) Enhance community preparedness for coastal land loss issues. This project meets the RESTORE Act Plan Comprehensive Plan priorities for habitats, water resources, living coastal and marine resources, natural processes and shorelines, and science-based decisions by developing a U.S. Gulf-coast wide network of High Frequency Radar stations to provide real-time monitoring of surface currents and waves in State waters. These stations are efficient, effective tools for meeting multiple public needs along the U.S. Gulf Coast. The proposal includes Project Management for the procurement, installation, and operation for these sites across the Gulf Coast. Also, includes Data Management for the design and integration to assure data meets all RESTORE-Act Policies and Procedures. Real-time distribution of these data to numerical models, and agency decision makers are included. An Outreach component is included to work with the Public and Agency Decision Makers, to assure the understanding and training is in place to integrate these user-friendly products in to day to day operations of each agency.	Hancock, 5	Yes	Yes	Yes	20	Yes	Yes	Yes	No	Yes		$ 20,000,000.00	$ -	

	Workforce Development	2139	10/6/2015	Reduction in post hooking sea turtle mortality	This proposal will develop new technology to reduce sea turtle mortality by developing methods to remove fishing line without removing endangered sea turtles from the water. This new method will be designed for inshore fishing from piers and bridges . The Endangered Species Act can shut a fishery down after a certain number of takes accure. The device I have designed will not require a fisherman to haul the turtle up in the air to the pier surface inorder to cut the line from the hook.. We will collect data and film our interactions with the device and the line. I will call IMMS to come collect the turtle. After proof it works as it should then we will share our information.!We will then do outreach and education to encourage the use of this technique by our Coastal recreational fishermen. This new technique will address the problems that our recreational fishermen are having in removing their fishing line from the turtles that they are interacting with while fishing in state waters. There has been increase interaction with these endangered species and this new technique will help with their protection. We will then be able to expand the use of this new method to other areas to help address their interactions with these endangered sea turtles. This device could be used as a midigation tool for a section 10 permit for the states. The data shows that these sea turtles die from becoming entangled in the line that was cut from the pole and left on the hook. A turtle can survive a hook but not fishing line. It causes them to drown and get infections. The new device would slid down the line and cut the line off at the hook without harming the turtle. This is a win for the turtle, the fishermen and the economy because our piers were not closed and I will supply as many as possible free to the states, the stranding team and fishermen. When this new technique is proven successful. A full report of the study and success of the new gear will be provided to All Gulf Coastal states and NOAA. This project will include providing new gear to be given to Mississippi recreational fishermen as long as the supply of gear is available in this pilot.	Jackson, H	Yes	Yes	Yes	25	No	Yes	Yes	Yes	Yes		$ 500,000.00	$ -		
	Workforce Development	2149	1/1/2015	Edible Forests of the MS Gulf Coast	This project will develop fruit orchards in every city and county in the three county of the MS Gulf Coast, Harrison, Hancock and Jackson counties. The Mississippi Urban Forest council will partner with our Tree City communities along the coast, local garden group and civic groups to develop the orchards. Training will be provided to citizens and those involved in the development of the orchards. Oversight for long term maintenance will be provided. Correct fruit varieties for the area, soils and climate will be taken into account for selection of species. This project will provide model orchards, encourage more local fruit production, provide education to implement sustainable orchards, improve healthy eating and provide sources of value added products for local citizens.	Jackson, H	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 450,000.00	$ -		
	Workforce Development	2168	11/7/2014	Gulf of Mexico Education & Outreach: Training the Next Generation of Environmental Health Managers	In recent years, direct and indirect anthropogenic impacts on Gulf of Mexico, and the Mississippi Sound, coastal ecosystems have reached crisis levels. In addition to the recent oil spill, this region experiences nutrient enrichment and pesticides from agricultural run-off, metals and chemical pollutants from industrial discharge, and a variety of pharmaceuticals and personal care products from community wastewater. These multi-stressors emphasize that as stakeholders and future generations of scientists deal with these increasingly complex environmental issues, they will need training in novel interdisciplinary skills and perspectives that will enable them to tackle these issues in creative ways. Using the GOM as a natural laboratory, we will train graduate students in the varied effects of aquatic stressors using cutting-edge technologies from a diversity of scientific disciplines (i.e., Biology, Chemistry, Engineering, Geology, and Pharmacy), and we will apply these lessons to societal implications (e.g., Restoration Management, Law and Policy). The Environmental Toxicology Research Program [ETRP] at the University of Mississippi studies these issues using a variety of techniques including: 1) Biomarker studies [cellular/molecular processes], 2) Environmental Processes [organismal- to community-level organizational effects], 3) Fate & Transport [chemical analyses], 4) Risk Assessment, and 5) Environmental Remediation. We propose to develop an intensive summer â€œboot campâ€ with broad training and multiple perspectives in these core research areas. Participants will receive training and mentorship from ETRP scientists, as well as collaborators in government and private industry laboratories to prepare them to deal with current and future GoM health issues. Specifically, we will recruit interested students (undergraduate, graduate and high school) and stakeholders from Mississippi communities for month long summer sessions divided between the UM Field Station (Oxford MS) and the MS coast. During the first third of the course, students will receive focused lectures and intensive â€œhands-onâ€ training in water quality analyses and biomarker surveys. The team will then drive to the Gulf Coast Research Laboratory where they will learn field monitoring procedures, and habitat remediation/restoration approaches. We plan to recruit 24 students into each of two summer sessions (i.e., June and July) for a total of 48 stakeholders trained each year. However, if funding will only allow a single cohort to be trained, the budget provided represents the aforementioned training for one month and 24 students only. This education and outreach program can stand-alone based on the efforts of the UM ETRP personnel and their collaborators, but we will attempt to leverage outreach opportunities with other funded Restore Projects to provide greater context for trainees. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No		No	Yes	Yes	No	Yes		$ 391,457.00	$ -		
	Workforce Development	2169	11/7/2014	Gulf of Mexico Health Assessment: Instrumentation for Environmental Monitoring	Marine coastal communities of the Gulf of Mexico, and the Mississippi Sound, represent important commercial fishery grounds, as well as habitats that support threatened species and provide essential coastal protection and recreation opportunities. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to the GoM have resulted in significant damage and loss of these critical ecosystems and the species they support. Thus, the management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. This requires cutting edge monitoring strategies that focus on measuring the concentrations of contaminants: 1) in local seawater and sediment, and 2) in species tissues. We propose to acquire two incredibly powerful monitoring instruments to enhance the existing University of Mississippi Environmental Toxicology Research Program [ETRP] resources. Specifically, we will upgrade our existing Gas Chromatography/Mass Spectrometer (GC/MS) to address contaminant concentrations in seawater and sediment at resolutions that are approximately an order of magnitude more sensitive than our current instrument. Likewise, we will also upgrade the ETRP Synapt proteomics mass spectrometer workstation to include a MALDI TOF interface to measure contaminants in tissues of affected species. While our current resources enable us to perform the studies proposed in other RESTORE proposals (PI: Slattery), these upgrades will provide state-of-the-art instrumentation for UM ETRP researchers, and will provide Mississippi resource managers access to sophisticated monitoring approaches that focus on the fate and transport of contaminants in the environment, as well as the stress responses of affected species in their entirety (i.e., the proteome). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	Yes	100	No	Yes	Yes	No	No		$ 400,000.00	$ -		

	Workforce Development	2176	11/11/2014	An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild shrimp fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild shrimp fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20- year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -		
	Workforce Development	2177	11/11/2014	An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild crab fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild crab fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -		
	Workforce Development	2178	11/11/2014	An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild oyster fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The oyster fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	No	Yes	16.7	Yes	Yes	Yes	No	No		$ 600,000.00	$ -		

	Workforce Development	2179	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program __x__ Workforce development _x__ Economic development ____ Eco-Restoration __ __ Seafood __x__ Other (Name): Tourism Brief description of activities: The tourism industry is known to be a significant component of the economic activity portfolio on the Mississippi Gulf Coast. One unique and significant aspect of the tourism industry in coastal Mississippi is the combination of a coastal environment and casino gaming. With limited resources, it is vital to invest in areas that yield the highest lifetime economic impact and to diversify where possible. However, there is no known comprehensive time-series assessment of the economic impact of tourism activities by sector in coastal Mississippi, nor is there any known collective effort to better understand who visits coastal Mississippi and why. The research project would model the economic impact of tourism activities annually over a ten-year period in coastal Mississippi and, subsequently, on the State of Mississippi. This project would also entail measuring behavioral perceptions and intent throughout this period. Among others, primary sectors in the overarching time series assessment would include casino gaming, beach and marine-related tourism, festivals and other annual events, eco-tourism, arts and museum tourism, sports tourism, and wildlife tourism. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Economic impact analyses will be conducted in the aggregate and by tourism segment to determine the effects on all sectors of the economy to include support amenities such as restaurants and bars, and hotels and lodging. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area.	Harrison	Yes	No	No		Yes	Yes	No	Yes	Yes		$ 15,000,000.00	$ -		
	Workforce Development	2180	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: Marine recreational activities are abundant on the Mississippi Gulf Coast, and this â€œblue economyâ€ is widely believed to significantly impact the local and state economies. However, there is no known comprehensive assessment of the economic impact of these coastal activities in Mississippi. Through extensive primary data collection, this research project would model the annual economic impact of coastal marine recreational activities over a ten-year period on both coastal Mississippi and the State of Mississippi. Activities in the annual assessment would include recreational fishing, onshore and offshore charter boating, big game fishing tournaments, recreational boating, and recreational activities on marine and inland waterways. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Annual economic impact analyses will be conducted in the aggregate and by activity segment to determine the effects on all sectors of the economy to include support amenities such as boat sales, bait sales, marine equipment sales, harbor revenue, etc. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None	Harrison	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 9,500,000.00	$ -		
	Workforce Development	2181	11/11/2014	Continuous record of water quality for evaluating restoration impacts (nutrients, trace metals, microbial communities and physical measurements)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. To deal with theses shortfalls, we have been developing and utilizing continuous fluid samplers (OsmoSamplers) for oceanic, estuarine, riverine, and land-based borehole research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing (Jannasch et al., 2004). Such systems have been designed for studies lasting days (samples every 15 minutes) to 5 years (samples every week). Samples also can be preserved in situ to stabilize dissolved metals, nutrients and microbial community structure (Robidart et al., 2013). We propose to deploy new state-of-the-art water quality monitoring systems that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. We move beyond standard nutrient measurements to included trace metals and microbes. Trace metals can be toxic and are mobilized by excretion of salt glands in Spartina alterniflora and contaminated and natural sediments the latter resulting from changes in redox state. Samples also will undergo standard microbial analyses with a particular interest in Ecoli, an indicator species for human health issues. However, the entire biome will be assessed because not much is known about the temporal aspects of microbial structure and function in these environments.	Jackson,Ha	Yes	Yes	No		No	Yes	No	No	No		$ 380,000.00	$ -		

	Workforce Development	2182	11/11/2014	Continuous Monitoring of Subsurface Water Quality (Nutrients, Metals, Salinity, Pressure) using Pizometers (Boreholes)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Within marsh environments nutrients and availability of water affect plant zonation as a function of competition, physical stress and nutrient limitation. Therefore, continuous monitoring of these constituents is essential for restoration projects in Mississippi Sound to understand the temporal aspect of water quality before and during restoration projects and to elucidate the effect of tidal forcing on the subsurface environment. For example, temporal monitoring within sandy march and coastal aquifers show a tidal influence on nutrient consumption and microbial productivity within the system (e.g., Sansone et al., 2008). We propose to deploy novel sampling and sensor capabilities in peisometer (boreholes) within and near restoration projects to monitor nutrient, trace metal, salinity, and water level in the subsurface. Such data will provide an indication of water flow, availability of fresh water, the transport and consumption of nutrients, and the mobilization of metals in response to changes in redox state and productivity of microbial communities within sediment. This proposed work goes beyond standard analyses to include trace emtals because mobilization of urban and industrial sources of trace metals (e.g., Fe, Mo, Cu, Cr, Pb, Zn, Cd, and Hg) through natural redox changes can reach concentrations that are detrimental or toxic in tidal creeks, watersheds, and in the subsurface. The novel system that we propose to deploy couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrient and trace metal concentrations. OsmoSamplers are continuous fluid samplers that have been utilized for oceanic, estuarine, riverine, and land-based borehole and piezometer research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing. The slow pump rate and small bore result in plug flow, minimizing dispersion (Jannasch et al., 2004). Such systems have been designed for studies of days (samples every 15 minutes) to 5 years (samples every week) and can be designed to preserve samples in situ for later laboratory-based analysis of dissolved metals. We propose to deploy 4 units in representative environments within Mississippi Sound proposed restoration projects for one	Mobile,Jac	Yes	Yes	No		No	Yes	No	No	No		$ 280,000.00	$ -		
	Workforce Development	2183	11/11/2014	RETINA: A K-6 STEM (Science, Technology, Engineering, and Mathematics) Program for Mississippi	Restoration and monitoring projects in Mississippi Sound require STEM (Science, Technology, Engineering, and Mathematics)-trained personnel and a community that appreciates the benefits of a healthy ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of proposed restoration projects. To address these deficiencies and to position Mississippi for the future we need to develop a childâ€™s capacity to develop theory-based learning, which is inherent and can be fostered by promoting curiosity and by exposing them to a spectrum of experiences. Such experiences play a vital role in achieving proficiency in science understanding, but unfortunately, a myriad of budgetary and socioeconomic reasons limits opportunities for youth, leaving many economically disadvantaged students trailing in STEM fields (NRC, 2007). To meet these challenges The RETINA Program provides schools with a cost-effective and administratively beneficial way to broaden the scope of student exposure through its STEM curriculum. The RETINA Program is a 50-minute per day program that lasts 5 days. The Program blends formal classroom instructional activities with hands-on, skill development in a team-based setting conducted by the teacher and guided by national science standards that are set for each grade (e.g., ecology and water quality). There are four different activities per grade that are presented during the first four days. Activities are chosen with the intention of integrating technology under the umbrella of a scientific process and are designed to provide consistency and a continuum of difficulty among the grades. The program focuses on interactive participation in the design and development of simple robotic and sensor systems, providing a range of challenges to engage all students through project-based learning and provide a medium for communicating interest, experience, and challenges on the fifth and final day of the program. The RETINA program has been designed, modified, and tested in several diverse schools in California and Vermont. It is now posed to expand. Because RETINAâ€™s hands-on activities require (1) components that may be prohibitively expensive in todayâ€™s educational fiscal climate, (2) secure storage space, and (3) technology-savvy individuals to maintain systems, the RETINA Program is designed as a traveling program that gives many students access to the same resources. We propose to (1) supply two towed cargo vans with all of the materials necessary for teachers to conduct the educational modules, (2) provide educators with program materials (lesson plan, PowerPoint presentations, homework, instructional videos, and images) and STEM professional development sessions, (3) introduce the RETINA Program within school systems to engage students, and (4) organize a community service organization to provide technical and logistical support to maintain and refurbish modules and to transport cargo vans from school to school.	Pearl River	Yes	Yes	Yes	20	Yes	Yes	No	No	No		$ 570,000.00	$ -	STEM Curriculum	
	Workforce Development	2189	11/12/2014	Development of a Statewide Engineering Innovation Program for Marine Science Applications in Support of Mississippi Sound Restoration Projects	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€¦ However, the number of trained engineers from institutions of higher learning that have a understanding of the challenges associated with working within the marine sector are insufficient and donâ€™t meet community needs. For example, remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). We propose to make an investment in the education of engineers at the college level within the state of Mississippi, by exposing students to challenging engineering applications in the marine world, thereby opening the door to a plethora of potential careers. To accomplish this feat we will team up with Dr. Chris Kitts, Associate Dean of Research and Faculty Development, School of Engineering, Santa Clara University, who is funding by the Kern Family Foundation to develop a multi-institutional, cooperative, engineering program in which teams of students engineers and mentors design and fabricate instruments, platforms, and/or sensors. These products are integrated among the various university-based teams to complete a specified task that accomplishes a scientific goal. This successful and long-standing program incorporates a dozen universities in the Midwest, where the Kern Family Foundation wants to make a difference. Building upon this successful program, we propose to a similar program within the state of Mississippi to integrate each of the schools of higher learning with an engineering program. The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for different sensors, vehicles, or platforms that will be developed at each of the participating universities. Student teams will design, fabricate and test their system in context of design criteria. This work will culminate with the teams meeting at the Gulf Coast Research Laboratory in Ocean Springs, MS. Each team will then participate in the mission to collect data for restoration projects. The cost for this program is $160K per year with half of the funds being spent on materials/travel/sensors for engineering teams and the remainder for coordination and science outcomes. Potential Year 1 projects could include, for example, the	Hancock,Ji	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 160,000.00	$ -	Curriculum development	
	Workforce Development	2190	11/12/2014	Purchase and Sea Trials of a 4000-m Capable Remotely Operated Vehicle for Marine Science Discovery and Experimentation	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€¦ An example of the growth in the marine sector is the expectation that remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). However, no deep-water ROV systems for marine science are based in the state of Mississippi or in any of the five states that border the Gulf of Mexico. We propose to make an investment in the infrastructure of Mississippi Marine Technologies though the purchase and sea trials of a 4000-m capable remotely operated vehicle (ROV). The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for an ROV that will be suitable for scientific operations within the Gulf. Upon delivery of the ROV, the NIUST team will subject the ROV to sea trials and design and fabricate the various tools that will be needed for scientific discovery and experimentation. The cost for such a vehicle would include a tether, winch, and tether management system, control van, and supply van. The vehicle would have 2 seven-function manipulators. The cost for this the design, purchase, and sea trials is ~$5M and would take 3-4 years to complete the final integration of systems for ocean operations.		Yes	Yes	Yes	100	Yes	Yes	Yes	No	No		$ 5,000,000.00	$ -	Equipment development and purchase	

	Workforce Development	2198	11/13/2014	West Harrison County Business Incubator	The Harrison County Development Commission (HCDC) is requesting $700,000 to construct a Small Business Incubator to be located in the Long Beach Industrial Park. This new facility would be operated in conjunction with The Innovation Center located in Biloxi. Since 1990, the Innovation Center has encouraged the development of small start-up businesses by offering entrepreneurs lower operating costs and the training needed to successfully interact in the business world. The current facility has been operating at ninety-five percent for the past three years highlighting the need for an additional facility.	Harrison	Yes	No	Yes	100	Yes	No	No	Yes	No		$ 700,000.00	#######		
	Workforce Development	2201	11/13/2014	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems Project Overview and Rationale Testing and validating new environmental monitoring technologies to enable long-term land use planning, management, and sustainability of coastal resources is a foundational precept of community resilience through ecosystem preservation and restoration. Protecting these coastal resources which provide critical ecological services to the communities along the Mississippi Gulf Coast in terms of buffers against storm surge and sea level rise requires long-term dependable, detailed, and proven information to make decisions that affect restoration and preservation outcomes. The National Oceans and Applications Research Center (NOARC) is focused on developing, testing, and validating the commercial applications of environmental monitoring technologies and the information they provide to address Mississippi restoration objectives while enhancing the long-term economic sustainability of this expanding geospatial information industry on the Mississippi Gulf Coast. Expansion and sustainability of this industry and its long term benefit to ecosystem restoration is currently inhibited by inconsistent means to calibrate and validate the basic data sets that underpin the derived resource management information. Scientific sampling designs to determine ecosystem restoration trends and quantified geospatial frameworks to make informed restoration investment decisions are critically dependent on calibrated and quantified data sets of known positional, spatial, spectral, and radiometric resolution. Replicable, calibrated data is the fundamental requirement for measuring spatial and temporal trends in coastal ecosystems that address long-term adaptive management alternatives. This proposal addresses the fundamental requirement for quantified data and geospatial information products by Federal, State, NGO, and private organizations focused on wetland restoration and sustainability. In addition, the long-term viability of this growing environmental monitoring service industry on the Mississippi Gulf Coast is also dependent on proven, demonstrable data and information product performance. The NOARC team will provide a comprehensive test range comprised of calibrated and instrumented target sites as well as highly instrumented and surveyed ecosystem reserves to Mississippi companies and universities to validate data products and derived geospatial information. The Mississippi Proving Ground will provide a unique, competitive edge to our companies and universities as they fully demonstrate and prove new monitoring technologies and information products to broader national and international markets. â€ƒ	Hancock,J	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 2,500,000.00	$ -		
	Workforce Development	3213	11/14/2014	University and College Volunteers for Restoration Projects	Community Collaborations International will deploy teams of university and college volunteers from around the country to participate in a week of service devoted to giving a boost of youthful energy to community based organizations supporting children, families, and the environment on the Gulf Coast. Community Collaborations International began working in the Gulf Coast ten years ago recruiting and organizing teams of college volunteers to assist with Hurricane Katrina recovery efforts. Since then, we have returned every year building relationships and a continuum of sustained impact in the region. Volunteer teams will coordinate their efforts with organizations such as the South Mississippi Land Trust, Audubon Society, Horticulture for Humanity, Gautier Parks and Recreation Department, Mississippi Department of Marine Resources, Boys and Girls Clubs of the Gulf Coast, Gulf Islands National Seashore, Renew our Rivers, and many more. Based on prior year results, we expect 30 universities and colleges to participate resulting in between 400 and 600 volunteers primarily during the month of March. 400 volunteers each committing to a full week of service results in over 12,000 hours of much needed support for community organizations! These students have made a commitment to spend their spring break week focused on meeting the needs of Gulf Coast communitiesâ€¦they work hard and get the job done.	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes		$ 410,000.00	#######		
	Workforce Development	3223	11/15/2014	Understanding the Economic Linkages Between Coastal Restoration and Community Recovery from Damages Associated with the Deepwater Horizon Oil Spill	Background The Mississippi State University Center for Urban Rural Interface Studies (CURIS), holds a mission to provide a clearinghouse of information regarding community socio-economic profiles, changes in land use, community resiliency, economic and disaster preparedness, and economic impacts of natural and technological disasters. Founded in 2005 just prior to Hurricane Katrina, CURIS was funded by the U.S. Department of Commerce through a project titled â€œMitigating Coastal Development Impacts in Rural Communities in the Northern Gulf of Mexico Region: Establishing the Center for Excellence in Coastal Resource Management.â€ The Deepwater Horizon oil spill disrupted the Gulfâ€™s economy, damaged fisheries and critical habitats. In order to understand the magnitude of the Economic Impacts of Deepwater Horizon Oil Spill to the different economic sectors affected, multi-year baseline economic information about each sector was compiled from various secondary sources. Response to disaster fails for a number of reasons including lack of communication between adjacent communities, community officials, state, local and federal officials, relief organizations, and the public. Additionally, prior planning was inadequate. Research that helps communities integrate and strengthen responses will result in better preparation for both predicted and unforeseen disasters and provide necessary short-term responses for those events. In addition to continuing the regional work of the Center, we also propose to strengthen its programming by developing a tool to aid communities in planning for and responding to disasters, regardless of origin. The strategy will be called COAST Growth (Coordinated Organizational Assessment of Strategic Technology). We propose to use a Systems Analysis approach borrowed from engineering to examine how communities on the Mississippi Gulf Coast responded to Hurricane Katrina as a unit. Common processes or redundancies would be determined, and ways to integrate and strengthen processes would be developed. This data could then be used to develop a coordinated approach for other closely associated communities to use for disaster response. This could be used as a community planning, training and response tool. Results from this initiative will reduce money spent by state and local governments for infrastructure related to closely associated communities by targeting commonalities that can be exploited and differences that require closer attention. It also has the potential to mitigate damages from future disasters, regardless of origin, by providing information to aid in all levels of	Hancock,J	Yes	No	Yes		Yes	Yes	Yes	Yes	Yes		$ 467,187.00	$ -		
	Workforce Development	3226	11/15/2014	Autonomous boat for routine monitoring of water quality (nutrients, trace metals, microbial communities and physical measurements) in Mississippi Sound	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. In a separate propose we presented the idea of using continuous fluid samplers in fixed (Eulerian) locations to monitor water quality using a system that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. This provides the ultimate record at fixed points. However, for some monitoring needs there is the desire for a larger spatial coverage (or Lagrangian distribution) and the need for larger volume samples for additional measurements. To meet this need we propose to develop an autonomous surface boat that is instrumented with physical and chemical sensors and capable of collecting up to 48 (500 ml) samples that can be preserved autonomously in the field. Such automation exists for science-based surface craft missions (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and is well suited for operation within the shallow, but busy waters of Mississippi Sound. The benefits of an autonomous boat are many. The boat can be (1) launched and programed by one person, who can monitor the boat locally, with others monitoring results using a web interface from their offices scattered about the state, (2) limits liability by taking the human out of the element while allowing the human to monitor obstacle avoidance sensors and other tracking and sensor systems.	Hancock,J	Yes	Yes	Yes	20	Yes	Yes	No	No	No		$ 530,000.00	$ -	Proposed Research Developement	

	Workforce Development	3230	11/16/2014	Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project are: 1.ÐUnderstanding Stakeholder Beliefs and Perceptions: The First Step toward Effective Engagement, Awareness, Outreach, and Policy Development To formulate effective engagement, outreach and educational programs requires an understanding of the underlying beliefs and values of various target audiences. Every individual, every community, and every culture has a set of beliefs and values that guide decision-making. Through the use of social science survey instruments, the underlying beliefs and values of selected target audiences will be surveyed at the local and regional scales to serve as a basis for effective engagement, technology transfer, education and outreach through the expanded Coastal REACH Program and to serve as a reference to gauge the effectiveness of these efforts. This information should also be very useful to the RESTORE Council as it considers project selection and evaluation. 2.ÐDeveloping Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities Social indicators are measures that describe the context, capacity, skills, knowledge, values, beliefs, and behaviors of individuals, households, organizations, and communities at various geographic scales. Social indicators are typically used to assess current conditions or attainment of social goals related to a variety of applications. Building upon Project 1 (described above), this project will identify and define social indicators that can be used to guide and incrementally evaluate habitat and water quality restoration and protection projects developed to implement the RESTORE Councilâ€™s Comprehensive Plan. The indicators can also be leveraged to serve as a common reference to evaluate the success of individual coastal watershed restoration and protection projects. This foundational project will be designed to support and evaluate many of the activities and projects facilitated by the RESTORE Council by addressing the societal dimensions inherent in the Councilâ€™s Comprehensive Plan. A wide range of questions exist that, if answered and monitored, could help the RESTORE Council achieve the success that it desires, such as:	Hancock, I	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 3,200,000.00	$ -		
	Workforce Development	3231	11/16/2014	Regional Coastal Land Grant University and Extension Initiative: Disseminating RESTORE Council-facilitated Coastal Restoration and Protection Projects, Activities, Outputs and Outcomes through Annual State-wide Conferences, Gulf-wide Summits and Extension	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project concept are: 1.ÐEstablishing a structure and processes for regional collaboration among Gulf of Mexico land grant universities and their coastal Extension programs to foster a consistent Gulf-wide approach that leverages Extension activities and capabilities to support the engagement, technology transfer, education, outreach and extension priorities of the RESTORE Councilâ€™s Comprehensive Plan. 2.ÐDisseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€“ from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Extension Service. The Smith-Lever Act of 1914 established the Cooperative Extension System, a publicly funded, informal educational system that links the U.S. Department of Agriculture, the land grant university system, and individual counties. Extension, as the off-campus educational arm of land grant universities, has a large footprint in each state with offices in all or most counties and trained staff to provide community education and outreach in multiple disciplines. Extension's overall purpose is education. Its unique interdisciplinary perspective enables the organization to make a real difference through the provision of research-based information, educational programs, and technology transfer focused on issues and needs of the citizenry of each state. Extension also hosts customer-friendly websites loaded with information sheets, publications, reports and other outreach materials designed for its stakeholders. Extension is organized regionally; however, the Extension structure on the Gulf coast is separated into two regions.	Hancock, I	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ -	$ -		
	Workforce Development	3237	11/17/2014	Job Training for Living Shorelines and Tidal Marsh Restoration.	Job Training for Living Shorelines and Tidal Marsh Restoration. A benefit of the RESTORE funds will be creating a stronger demand for skilled workers to install living shorelines and do work to restore tidal marshes. The skills for such green jobs combine construction and landscaping skills along with a sufficient knowledge of tidal ecology to be able to understand the end goals of a restoration project. The outdoor work environment is demanding and requires good work habits to be safe and productive. What is more, such projects are interesting to the general public and have the potential to encourage people to take better care of the environment. Therefore, the project installers often have opportunity to engage with people on site to explain the project. There is growing interest with private property owners to apply best practices to water front property and instead of rebuilding bulkheads to use more resilient and ecologically beneficial shoreline improvements. So the workers on site should understand the project and be able to explain the benefits of the project to curious site visitors. There will be a need for job training for living shorelines and tidal march restoration. The RESTORE funds for restoration projects can be leveraged to pay for such job training as a way to build capacity for future restoration projects. Many of the jobs created by such projects have pay comparable to building construction jobs and, like building construction, are job skills that are best gained by hands-on learning. The RESTORE funds will have a long-term impact on such emerging green jobs if training programs are part of the community benefits. Partnership The proposal is submitted by the Gulf Coast Community Design Studio in partnership with Moore Community Houseâ€™s Women in Construction Program. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service	Hancock, I	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 90,000.00	$ -	Curriculum development	

	Workforce Development	3240	11/14/2014	Women in Construction Program	Organizational Overview: Moore Community House (MCH) was founded in 1924 to serve the children of migrant workers in the seasonal fishing industry. Today MCH responds to the needs of low-income women and young children in east Biloxi through two programs that research shows make the most strategic and positive difference in moving a low-income family closer to self-sufficiency: quality affordable early childhood education and job training that leads to higher paying employment. Through the Women in Construction Program (WinC), MCH creates a pathway for low-income women to higher paying jobs in the construction industry. Women make up nearly half of the workforce in Mississippi (MS) but women earn less than men at every income and education level, and in every profession. Women are clustered in low paying jobs, making up 80% of minimum wage workers. MS has the highest rate of single-mother headed families, mothers who bear financial responsibility for children. Minimum wage leaves a family of 2 (mom and child) below the federal poverty level. Construction jobs are the only ones in MS where women earn the same wages as men, and these jobs pay an hourly wage identified by the MS Economic Policy Center as a self sufficiency wage. Thus, WinC offers a pathway for women to family economic security. The mission of WinC is to create a climate across the Gulf Coast enabling women to pursue careers which will allow them to earn wages to promote self sufficiency within the construction field. Besides helping provide well-paying jobs to the region's low-income women, it helps meet industry demands for a trained workforce. While the construction trades offer careers that provide self-sufficiency wages and good benefits, WinC is the only job-training program in the region that is tailored to prepare women for this work. At this point and time it is critical to maintain momentum by expanding programming, reaching more women, and strengthen the community towards economic and ecological recovery. Since inception of the program, WinC has graduated 22 classes totaling 220 plus women in the fields of general construction, welding, green job training, and disaster relief and recovery. Of the 220 plus women who have graduated the program, 75% of these individuals have gained employment. Graduates have gained living wage jobs in apprenticeship and nontraditional occupations in trades such as, welding, shipfitting, habitat restoration, and construction management, earning from $14 to $28 an hour. WinC is feminizing the face of construction on the Gulf Coast one well-trained woman at a time. Qualitative data is used to assess impact that improves socioeconomic wellbeing. Participants have made cross cultural bonds, left abusive	Mobile,Jac	Yes	Yes	No		Yes	Yes	No	No	No		$ 1,500,000.00	#######	
	Workforce Development	3241	11/17/2014	College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA)	Brief Title: College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA) Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438; Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402; Dr. Faye Gilbert, Faye.Gilbert@usm.edu, 601-266-5544 Type of project: _x_Infrastructure __x_ Educational program __x___Research program __x_Workforce development __x_Economic development __x_ Eco-Restoration __x_ Seafood __x__Other (Name): Tourism Brief description of activities: The proposed building will house the College of Business on the USM Gulf Park campus and the Center for Coastal Analytics (CCA). Since Hurricane Katrina, the College of Business at USM Gulf Coast (CoBGC) has been housed in an inadequate modular structure. The CoBGC serves the educational needs of over 500 undergraduate and 100 MBA students each year. The CoBGC operation will include the new Center for Coastal Analytics (CCA), created for the purpose of conducting economic impact analyses, primary research projects, financial analyses, business assistance for entrepreneurial start-ups, and graduate education focused on two critical sectors of the Mississippi Gulf Coast economy: blue economy activities and Coastal tourism. The new building (and CCA) will be constructed on the Gulf Park campus of the University of Southern Mississippi and will unite and house the intellectual capital of the College of Business. The CCA will provide long-term economic impact analyses and primary research for the commercial seafood fisheries (i.e., shrimp, crab, oyster, spotted seatrout, red snapper), recreational fisheries and marine tourism, and Coastal tourism sectors unique to the Mississippi Gulf Coast (gaming, hotels and lodging, restaurants, sports tourism, ecotourism, creative economy tourism, culinary tourism, festivals and events unique to the area such as Cruisinâ€™ the Coast). The CCA will provide business plan assistance and training to support entrepreneurial activities. The CoBGC and the CCA will support the development of two unique graduate certificate programs in the country: marine economics and coastal tourism. These programs will train graduate students from the marine sciences and fisheries in the business analytics and strategies associated with Coastal marine activities; the certificate in coastal tourism will train graduate students and working professionals/executives in the business valuations of tourism sectors and new ventures. Location (City, County): Long Beach, Harrison County	Harrison	Yes	No	Yes	86	Yes	Yes	Yes	Yes	Yes		$ 35,000,000.00	$ -	
	Workforce Development	3267	11/18/2014	Gulf Observing Aerial Program (GOAP) Feasibility Study	HCPHC proposes a study to determine the feasibility of the Gulf Observing Aerial Program (GOAP). Because of the importance of the Gulf of Mexico to vital interests such as seafood, commerce, energy and recreation, it is imperative that we closely monitor this body of water and coastline for any signs of environmental threats. Our heightened awareness that offshore drilling disasters can affect the entire Gulf, instead of just one spot, should warrant the implementation of a Gulf-wide monitoring system (GOAP) that can best be achieved by the utilization of a robust and diverse fleet of unmanned aircraft with remote sensing and monitoring equipment. Stennis International Airport, with its unpopulated corridor to the Gulf, can be the base of operations for a combination of fixed-wing, rotary-wing, and lighter-than-air airships. This program would create approximately 300 jobs on the Mississippi Gulf Coast.	Hancock	Yes	No	Yes		Yes	No	No	No	No		$ 400,000.00	$ -	
	Workforce Development	3271	11/18/2014	Stennis International Airport International Flight School	HCPHC proposes to construct an international flight training facility at Stennis International Airport (SIA). International student flight training demand continues to increase, as flight training in foreign counties becomes more cost prohibitive. A training facility at SIA for international students will allow for increased aircraft activities at the Airport, create new flight instructor positions, and will bring the Mississippi Gulf Coast a previously untapped influx of foreign monies.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 650,000.00	$ -	
	Workforce Development	4263	12/19/2014	Costal Workforce Development and Training	The Workforce GoTeam recommends developing a two-year marketing campaign focused on promoting workforce development and training in the three coastal counties of Hancock, Harrison and Jackson. The marketing campaign will help support the effort to develop and sustain a highly qualified workforce, as well as support the partnership efforts with the local school districts and high schools, Mississippi Gulf Coast Community College (MGCCC), Pearl River Community College (PRCC) and MDES WIN Job Center. The campaign will connect high school students, parents and the unemployed with the community college training programs and companies in need of a skilled workforce. Though informative, the campaign will concentrate on being persuasive in nature. It will focus on persuading residents in our target audiences that staying on the Mississippi Gulf Coast and taking a more immediate career path is not only acceptable, but also attainable. The benefits of being employed and remaining/living on the Mississippi Gulf Coast will also be touted in a visually and verbally compelling manner. A particular emphasis will be placed on high school students, their parents and their guidance counselors to convey the opportunities available through alternate education and training. The end result of the non-collegiate career path will be communicated by illustrating the promising future (highly competitive salary, job security, quality of life) these individuals face â€“ with the appropriate training. This effort will help level the playing field for college path and non-collegiate career path high school students, thus helping to decrease the dropout rate and increase the employment rate.		Yes	No	No		Yes	Yes	No	Yes	Yes		$ 2,000,000.00	$ -	

	Workforce Development	4266	12/19/2014	Tourist Corridor and Gateway Beautification - Pedestrian Areas	A more attractive appearance, tourist friendly public amenities and coordinating tourist information signage is needed in order to maximize the effectiveness of programs and marketing that generates trial to our destination. 2.According to a recent visitor perception study, the beauty of the area is an attribute that drives visitor satisfaction. Of those that were not satisfied with their visit, 36% noted cleanliness and the perception of Katrina recovery issues as a major reason. 3.This research also shows that one of the reasons cited for not visiting the Ms Gulf Coast is lack of a variety of things to do. With over 600 visitor amenities, attractions and activities available, it is clear that we need to improve our communication of tourism offerings. 4.Improving visitor signage will increase awareness of tourism offerings and increase length of stay and therefore economic impact. 5.A recent study in a competing market indicated that 20% of their visitors pass through one or all of our Coastal counties on their way to their market, however there is very little directional signage on the major by-ways appealing to visitors. 6.Improving the visitor experience will generate return visits and invaluable word of mouth advertising for our destination, especially in this age of social media when personal experiences and endorsements are the most trusted source of information for travelers. 7.Harrison and Hancock County already have fully developed plans with costs that include tourist friendly areas, signage, parking, amenities and more that would make Beach Boulevard and Hancock County waterfront and beach areas a true visitor destination. These plans could easily be expanded and coordinated for Jackson County tourist areas. Managing these plans as one project with inter-local agreements and cooperation between municipalities will enhance and strengthen our destination marketing as one Mississippi Gulf Coast. 8.Several parts of the plan have already been funded and are expected to be completed this year including way-finding signage coordinated with a tourism entity directory. 9.Additional jobs will be created to complete construction and installation of the new facilities and enhancements as well as potential permanent jobs necessary to provide ongoing maintenance. Required Funding: Complete pedestrian areas used for walking, biking, jogging, etc. along the beach via continuation of concrete boardwalk where	Hancock,H	Yes	Yes	Yes	50	Yes	No	No	No	Yes		$ 9,600,000.00	$ -		
	Workforce Development	4267	12/19/2014	Family Friendly Amenities	Prior to Hurricane Katrina, the Coast offered a large variety of family activities available at all price points that have not been rebuilt. According to visitor perception research, variety of things to do drives repeat visitors. 2.Investments that broaden visitor experience could help to increase length of stay. TNS research indicates that the average length of stay for visitors along the Gulf Coast is 2.8 nights compared to 3.4 nights nationally. Reaching the national average length of stay could increase visitor spending by $160 million annually. 3.Insurance costs and more stringent building requirements has made rebuilding these family friendly attractions cost prohibitive 4.New attractions will require staffing and therefore create new jobs 5.The new Ballpark in Biloxi, re-opening of the Water Park in Waveland and others throughout the Coast are a good start but must be augmented by additional complementary attractions in order to recapture this lost market segment. B.Required funding 1.A matching grant fund of $7,500,000 for new or expanded family friendly attractions built near or in conjunction with lodging facilities and/or other existing family friendly attractions C.Project attributes 1.Sustainable 2.Coast-wide impact 3.Generates new state and local tax revenue 4.Creates jobs		Yes	No	Yes	100	Yes	No	No	No	Yes		$ 15,000,000.00	########		
	Workforce Development	4281	12/31/2014	Workforce Marketing for NASA Stennis Space Center	NASA STENNIS SPACE CENTER TECHNOLOGY CORRIDOR WORKFORCE MARKETING The Mississippi / Louisiana Gulf region has all of the economic development elements in place to build a thriving economy: infrastructure; human capital; marketable locations; and, quality of life and place. It is important now more than ever to invest in the long term sustainability of economic growth and prosperity of business and industry along the Gulf Coast Region. Residents and businesses in Louisiana and Mississippi have struggled to overcome the effects of Hurricane Katrina, the decline of the national economy, and the Gulf Oil Spill. The Restore Act provides a unique opportunity to bring the people of the Gulf Coast together as one region to positively affect the Coast economy. The region is home to one of the most exciting and dynamic job-creators in the country: NASA Stennis Space Center. To expand the economic benefits to the two state region from this economic driver, there is a need to market this asset to enhance the image of the region as a visitor and residential product that offers quality living and high tech, high paying sustainable job opportunities. The goals is to generate new residential home sales and rebuild the lost population to drive new business income, sales taxes and jobs to the region. NASA Stennis Space Center is already a significant source of employment and income in the region. The direct economic impact of the center on the 50 mile radius surrounding the center is $619 million. The direct global economic impact is $940 million. With a total workforce of 5,128 and average annual salary with benefits estimated at $87,000, it is an envious place to work. The skill set is primarily scientific and technical with the majority of the personnel holding bachelor degrees and higher. The Navy is a growing sector at Stennis. This represents a great opportunity for Stennis to expand its resources and create new jobs for Mississippi and Louisiana. The Navy already employs over 2,500 at Stennis and consolidating Mission Control Centers for Autonomous Underwater Vehicles and growing the SBT-22 presences will create even more jobs. Following the Gulf Oil Spill, the International Economic Development Council (IEDC) released a Marketing Strategy Plan for the	Stone,Han	Yes	No	No		Yes	No	No	No	Yes		$ 1,486,000.00	$ -		
	Workforce Development	4282	1/2/2015	Classrooms and dormitories for the Center for Marine Education & Research (CMER) in Mississippi.	INTRODUCTION: The Institute for Marine Mammal Studies (IMMS) is a non-profit 501 (c) (3) organization dedicated to marine education, conservation, and research of marine mammals and sea turtles in the northern Gulf of Mexico. It operates a premier, state-of-the-art Center for Marine Education and Research (CMER) in Gulfport, Mississippi. It is the only facility on the Mississippi Gulf Coast that has the capability and expertise to care for sick and injured marine mammals and sea turtles while providing opportunities for marine education and research. IMMS serves as a liaison between public and private entities interested in marine mammal science and has partnered with the University of Southern Mississippi, Jackson State University, Louisiana State University, University of South Alabama, and the Mississippi Department of Marine Resources (MSDMR) to fulfill the state and federal needs regarding marine education, research, and response to and care of stranded marine mammals and sea turtles. IMMS also played a central role in the response to the BP oil spill in the northern Gulf of Mexico. Information on the programs and activities of IMMS can be obtained from its web site: www.imms.org REQUEST: IMMS proposes to construct dormitories and additional classrooms at the CMER in order to enhance research and educational programs and activities. This would allow IMMS to better collaborate with graduate students and scientists from the U.S. and abroad by providing inexpensive accommodation. IMMS works with nearby Universities and would like to expand its collaborative efforts to include other Universities in Mississippi which are located up to six hours away. The proposed dormitories would allow students and researchers from these Universities to contribute to the research efforts that are being conducted by IMMS in conjunction with MSDMR. Furthermore, it would allow us to house high school students from all over the state for educational camps, fieldtrips, and overnight activities throughout the year. This would greatly extend the educational outreach that IMMS is currently able to provide to the Gulf Coast and the State of Mississippi. The proposed project will not only benefit IMMS. It will provide additional support for MSDMR and the State of Mississippi by enhancing marine education, research, conservation, and instilling the importance of good stewardship in future generations. IMMS currently has the land and the necessary infrastructure (e.g., roadways, utilities, etc.) in place to start the project.		Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -		

	Workforce Development	4292	1/6/2015	Public/Private Training Partnership Program	The Mississippi Development Authority (MDA) proposes to establish a Public/Private Training Partnership Program to provide workforce training in Hancock, Harrison, and Jackson counties through state institutions of higher learning, community and junior colleges, and Workforce Investment Network job centers ("Training Providers"). Funds will be used to support high-impact workforce training partnerships between Training Providers and approved private companies, public entities, and not-for-profit organizations. The program will focus on college students and recent college graduates by providing internships and training opportunities with companies and organizations located in Hancock, Harrison, and Jackson counties. Workforce training under the program may include internship programs, occupational skills training, and educational training including workplace literacy, basic skills, and soft skills.	Harrison, J	Yes	No	No		Yes	Yes	No	Yes	No		$ 2,000,000.00	$ -	
	Workforce Development	4299	1/9/2015	Mississippi Gulf Coast Business Resource Centers	Mississippi Gulf Coast Business Resource Centers Entrepreneurial support is one of the keys to positioning communities for economic success in tough times. With the economy struggling to get back on track following Katrina, the Gulf Oil Spill, Isaac and the recession, there was and still is a need to fuel the small business engine by giving entrepreneurs and companies the support they need to re-open their doors, recover, expand and hire more workers. When the Deep Horizon Oil Spill hit, the Hancock Chamber of Commerce was poised to launch the business resource recovery center, using the Katrina model as a template. In the aftermath of Hurricane Katrina, the Hancock Chamber of Commerce was on the ground immediately providing technical assistance to businesses. Through a Gulf Oil Spill Grant grant from the Economic Development Administration, the Hancock Chamber of Commerce together with the Hancock Community Development Foundation and the City of Bay St. Louis established a Regional Business Resource Recovery Center (BRRC) for the Mississippi Gulf Coast and managed the center from July 2011 â€" December 2013. In 2013, the Hancock Chamber was awarded the Community Economic Development Award for this program by the Mississippi Economic Development Council. The center has now become dormant due to lack of funding. Through this proposal, we recommend that a total budget of $8.4 million be allocated from the Restore Act Funds to fund a Mississippi Gulf Coast Business Resource Center Program. Using the Hancock Chamber Model, we propose to Develop a Small Business Task Force & Business Resource Center in each county, using existing Chambers of Commerce to bring all key stakeholders together to: Stabilize local businesses; ▪tabilize jobs and incomes for individuals; ▪tabilize community structures; ▪ebuild community, business and consumer confidence; ▪et targets and timelines; and, ▪entify existing plans and resources.	Jackson, H	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 8.40	$ -	
	Workforce Development	4305	1/26/2015	A Hancock County Aerospace and Workforce Academy	Aerospace is a staple on the Mississippi Gulf Coast, despite the lack of comprehensive aerospace and industry-related training programs from both the academic and workforce training perspectives. The Pearl River Community College (PRCC), which services Hancock County, and the Hancock County Port and Harbor Commission (HCPHC) have the will, need and wherewithal to make such a comprehensive training program a reality. With PRCCâ€™s existing academic and workforce training acumen and HCPHCâ€™s land strategically located on the Stennis International Airport airfield, a very successful partnership can be formed, if it is supported by Restore Act Funding in an estimated amount of $10 million for constructing a multipurpose 43,100 sf. facility and related parking, apron and taxiway and an estimated $3.1 milion for a three-year operational start-up period. Hancock County, which is home to Stennis Space Center and Stennis International Airport, has robust aerospace activity in both the private and federal sectors with twelve industries in the private sector alone, and coast wide there are 25 aerospace industries, with an untold amount of smaller support business with industrial training needs. While there is strong sector activity, lacking are the components that would create a true industry cluster and a major factor in cluster development is the existence of a universities and colleges supportive of that activity. Once a strong industry cluster is in place, synergies are created that are hard to easily duplicate in other regions. PRCC and HCPHC wish to enhance the Gulf Coastâ€™s existing competitive advantage with the creation of an aerospace and workforce academy that would provide the academic, workforce training, and networking components that weave the threads of synergy even tighter for aerospace in Hancock County.	Hancock	Yes	No	Yes	15	Yes	Yes	No	Yes	Yes		$ 10,000,000.00	$ -	similar to ID
	Workforce Development	4319	2/20/2015	Requirements Analysis and System Architecture Definition for an Operational Ocean Observation and Modeling System	The Gulf of Mexico living coastal and marine systems are experiencing stress from man-made disruptions including the Deepwater Horizon incident and natural phenomena, including severe storms, sea level rise, coastal depletion, hypoxia and compromised water quality. Decision makers have not been afforded with the actionable information and knowledge needed to make well informed decisions in interest of the public and the associated businesses and industries along the Mississippi Gulf Coast with regards to short and long term coastal management. Apparent in recent man-made and natural disasters is the inability to predict the effects of these events due to the lack of in-situ sensors, ability to assimilate data from all sources and modeling the effects of these events in a timely manner. Two prominent examples are the case of Deepwater Horizon, the ability to rapidly forecast the direction of the spill and Hurricane Katrina, the ability to accurately predict storm surge. Also, resulting from Deepwater Horizon was the need for baseline environmental conditions. In order to respond to these anthropogenic and natural disaster in both tactical and strategic time scales, is an operational center inclusive of comprehensive sensing, modeling and forecasting capability and the associated infrastructure along the Gulf of Mexico, specifically the Mississippi Gulf Coast, to adequately respond to these environmental conditions occurring at temporal scales from hours to decades and spatial scales from meters to kilometers. Proposed is to document requirements for a sustained operational center, from observations to decision products, and develop and end-end Concept of Operations (CONOPS) for MS RESPONSE. This would be based on requirements from all stakeholders to include, but not limited to, the Mississippi Department of Environmental Quality (DEQ), Department of Marine Resources (DMR) and other local, state, and federal. From an economic development perspective, â€œBlue Economyâ€ this will include industry located on the Gulf Coast and outside will be interviewed to determine requirements for a test-bed that would attract industry to locate on the Mississippi Gulf Coast. Federal Agencies will be interviewed to determine their requirements, including test-bed and range requirements. This will include but not limited to Office of Naval Research (ONR), Commander, Naval Meteorology and Oceanography Command (CNMOC), Naval Oceanographic Office (NAVOCEANO) and National Oceanographic and Atmospheric Administration (NOAA). It is fully recognized this is not a complete list and once work is initiated many stakeholders will be added and interviewed. Based on all assimilated requirements a CONOPS for MS RESPONSE operational center will be developed. This will be an all-	Hancock,S	Yes	No	No		Yes	Yes	No	No	No		$ 1,475.00	$ -	

	Workforce Development	4331	3/5/2015	Idenifying Mississippi Businesses for RESTORE Projects	Under the RESTORE Act, funds will be disseminated to a number of entities for projects involved in conservation, coastal activities and economic development, and a number of other topics. The goal of these projects is to create a Mississippi coast economy that is thriving, with an approach to coastal activities that supports ecosystem sustainability and coastal resilience. Key to RESTORE project success is involvement of local Mississippi companies as these projects are conceived and planned, carried out, and monitoring mechanisms are established. The Mississippi Enterprise for Technology (MSET) serves as a conduit to local and regional small businesses. MSET proposes to assist RESTORE Act coordinators in identifying Mississippi and other regional companies to assist in RESTORE projects. MSET, a nonprofit organization based at Stennis Space Center, is funded by state and federal agencies to, in part, assist companies in finding business opportunities. The organization routinely connects small businesses with federal agencies and large prime contractors for opportunities that range from construction to high-technology research and development. This is accomplished by a number of mechanisms that include networking events, opportunity presentations, business matchmaking, e-introductions, and email distributions. The goal of these activities is to get as many local companies involved in supporting federally funded projects and programs at Stennis, in the region, and across the nation. Through the course of the last several years, MSET has developed a substantial database of local companies â€" our emails are distributed to nearly 3500 people in the local area (and some from outside the region). These companies consist of suppliers, service providers, technology companies, construction companies, engineering firms, consultants, and other organizations that might assist in larger projects associated with RESTORE funding. MSET proposes to use this archive of companies to assist RESTORE projects in keeping as much of the work in the local area, supporting the development and/or expansion of small Mississippi companies. As an example of how MSET could support a project as it gets started, a wetlands monitoring project can be used. This project will require equipment, field work, data collection, possibly lab work, data manipulation and database support, as well as reporting. MSET would assist in identifying capable small companies to assist in these efforts, focusing on Small Disadvantaged Businesses. Additionally, MSET would assist in identifying the local assets, such as the laboratories at NASA that might be used to support the work, so no expensive re-creation of existing capabilities occurs during the project that cannot be sustained.	Hancock	Yes	No	No		Yes	No	No	Yes	No		$ 90,000.00	$ -	
	Workforce Development	4348	4/13/2015	Lady Fab Trio (travel, higher education, and health management)	The â€œNHR Blueprint Foundationâ€™s a 501c3 non-profit organization working to address the specific needs and problems associated with young women. Established in 2013 in Diamondhead, MS, with the business office in Gulfport, MS, our mission is to aid our community in launching eradication of disparities amongst women. We aim to emphasize encouraging young women to stay in school, pursue entrepreneurship and travel, and be fabulous! Our goal is to encourage young women to pursue broader horizons in career and travel, including obtaining passports, dressing for success, higher education, health management, and free enterprise. Our vision is to spearhead a generation of young ladies more cognizant of opportunity, healthy living, and the benefits of versatile travel. We hope to connect with every community from the Gulf Coast to Jackson to encourage the attitude â€œdonâ€™t view me as a princess, see me as President!â€!! In staying keeping with our goals of travel, higher education, and health management, the Lady Fab Trio encompasses three programs: Operation Worldly Girl, Heart Beat to the Beat, and Medical Room Ready. â€œOperation Worldly Girl (OWG)â€!s a program that will assist high school female juniors and seniors in receiving passports and acquiring knowledge of foreign opportunities, and bring that experience back to benefit the state of Mississippi. We will contract with the local passport office to have staff on site to process selected young ladies. The event will embody guest speakers that will introduce ladies to study abroad opportunities, internships, summer and senior trips. Though the initial phase will only promote travel to the Caribbean and Canada, the goal is for OWG to become an annual program that will enlist representatives that will provide young ladies with opportunities in Europe and Asia. OWG will offer many fun and informative programs catering to young women. This includes guest speakers, workshops, games, international foods luncheon, dress for success make-overs, demonstrations, and many other activities. We will provide accommodations for our guest speakers, honorarium, certificate of completion for the young ladies, passport photo taken onsite, and processing of passports. This program will be offered free to local high school juniors and seniors, with prequalification/selection prior to the event. OWG, with food and activities for young ladies of the Gulf Coast Region, will allow us to put on a program educating girls on disparities, self-esteem, diversity, and entrepreneurship. â€œHeart Beat to the Beatâ€¦HB2B) is a cardio dance workshop seeking to identify past attitudes and behaviors regarding exercise and diet in mothers and their daughters. We will seek to identify historical aspects of family exercise and meal planning		Yes	No	No		Yes	Yes	No	No	No		$ 750,000.00	$ -	
	Workforce Development	5378	7/7/2015	Intelligent Communities: Helping rural communities transition to, plan for, and prosper in the digital age	The Mississippi State University Extension Intelligent Community Institute helps rural communities transition to, plan for, and prosper in the digital age. The Institute, in partnership with local champions, schedules a series of presentations to increase awareness of what the implications of the digital age are for rural communities. The next step is the community completing a checklist that will serve as a benchmark and plan to move forward. The Institute coordinates resources to address the needs identified in the checklist report. For example, helping communities with their online presence, deploying or enhancing robotics to help with their knowledge workforce, increasing telehealth awareness, providing digital literacy workshops, etc. The ultimate objective is to help rural communities become intelligent. An intelligent community is one that understands the challenges of the digital age and takes conscious steps to prosper in it. If funded, this proposal will target both coastal communities as well as more rural communities to the north and help them transition to the digital age. This goes hand in hand with Governor Bryant's plan to increase broadband connectivity on the coast. Broadband connectivity is but one component that needs to be coupled with education and awareness to better use the technology. The Intelligent Community Outreach achieves precisely that.		Yes	No	No		Yes	Yes	No	Yes	No		$ 150,000.00	$ -	
	Workforce Development	5383	7/31/2015	MS Gulf Coast Economic Development Data Project	Project summary Southern Mississippi Planning and Development District will create and maintain a one-stop resource for consistent, accurate, up-to-date data across the Mississippi Gulf Coast counties of Hancock, Harrison and Jackson. It will be designed with input from and for use by professional economic developers, local governments, tourism bureaus and others actively seeking to create new jobs, grow existing business and stimulate more wealth along the coast. A standardized approach to data collection will benefit the entire region. Data collection input and display Data collected will be organized and maintained in a geospatially-enabled database management system. SMPDD will use a dedicated GIS server and provide user login and password-protected access for authorized users. One of the major features and benefits of this solution will allow continuous access to the most updated data, as the server will retrieve data directly from the working database. The data may be displayed in static tables or in user-generated tables, allowing online map viewing and hard copy downloads. Data categories and areas of research SMPDD will seek input from the professional economic developers to determine the fields for the database. Some data may be available on a public domain and other data may be purchased. Topical areas may include but are not limited to â€" â€¢ Population and projections â€¢ Growth patterns â€¢ Building permits â€¢ Workforce/labor â€¢ Infrastructure â€¢ Real Estate and property tax Potential partners We will seek and anticipate cooperation with â€"	Harrison, H	Yes	No	No		Yes	Yes	No	Yes	Yes		$ -	$ -	

	Workforce Development	5388	8/30/2015	Developing Grassroots Ideas for the Purpose of Building a Sustainable Economic Engine by Finding Innovative Ways of Restoring Gulf Coast Industry and Reinvesting in Existing and New Business Development	Executive Summary The proposed plan outlines a multi-faceted approach to developing a Community-based High Technology Laboratory capable of producing an â€œEconomic Engineâ€ resulting in innovative approaches to developing for-profit businesses and industry, future products to capture retail trends, and innovations in green technologies in order to produce sustained economic and community development in targeted impoverished regions. The Coastal cities and Counties sit at the epicenter of the slowest recovery from the effects of natural disasters and economic and community development in the State of Mississippi. Hancock, Harrison, Jackson Counties in Mississippi are parts of the coastal Region which severely suffers from challenges in business development, economic disparities, poor school systems and inadequate predictable measures for warning evacuees and responders during disaster events. A multi-faceted approach capable of maximizing existing resources while creating an effective â€œEconomic Engineâ€ is needed to stimulate job creation in the targeted region. This engine has to be strong enough to â€œdriveâ€ consistent level of development while creating tools that will produce short-term, mid-term and long-term results. The Transocean and BP settlements can be effective â€œDriversâ€ in order to have create the flexibility to assess outcomes and effectively change course to achieve set objectives capable of sustaining effective economic growth. We believe the goal in the Coastal region should be to create a viable, productive and growing economy capable of maximizing its rich assets. The Living Word High Technology Renewable Energy and Business Development Incubator (HTREBDI) can be the catalyst needed utilizing SBS Laboratories to effectively â€œdriveâ€ economic and community development in the Coastal region.	George,Ja	Yes	Yes	Yes	25	Yes	Yes	Yes	Yes	Yes		$ 10.00	$ -	
	Workforce Development	5399	9/2/2015	Point Cadet Revitalization from Highway 90 Bridge to I-110 Corridor along the Back Bay of Biloxi	This comprehensive project will revitalize waterfront areas of East Biloxi from the Highway 90 Bridge north and west to the I-110 Corridor through multi-use improvements to enhance and restore natural resources, create jobs, support the seafood and maritime industries, and expand family-oriented attractions to extend visitors' stay on the Mississippi Gulf Coast. Throughout the project area, the City will provide safe, convenient public access to the shoreline and will enhance traditional working waterfront activities with a variety of land uses that showcase local seafood through shopping, dining, entertainment, and educational venues. RESTORE grant funds will be used as part of a public investment strategy to yield a long-term increase in value by revitalizing the Back Bay shoreline east of the I-110 Corridor and adjoining Old Biloxi neighborhoods by enhancing public access to the waterfront and revitalizing the seafood industry through public improvements that will include expanded commercial dock space and supportive landside amenities. The project will include incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program. Redevelopment of the project area, as well as of the local seafood industry, has been particularly slow following its devastation by Hurricane Katrina. The Back Bay Festival Marketplace and recreational marina component of the overall project will be located at the site of the Sherman Canaan Fishing Dock, which includes approximately 15 City-owned acres at the north end of Lee Street. This public waterfront area will be reconfigured to offer a marina with recreational boat slips for temporary and long-term rental (for private and for-hire vessels); venues for retail shops and restaurants; a sailing school; and space for Mississippi Department of Marine Resources boating safety lessons and boating storage/operation. The market place will include an open-air kitchen area to showcase local seafood and to educate the public about seafood cooking methods and opening oysters, as well as facilities for workforce training in culinary arts that focuses on Gulf seafood and locally-grown/raised products. Shrimping boats currently berthed at the Sherman Canaan Fishing Dock will be relocated east to a new commercial marina that will be constructed on previously-developed property to be acquired by the City in the vicinity of Oak Street. This new marina will improve commercial boat access to Gulf channels and will offer landside improvements such as convenient off-loading areas, boat-building and repair areas, marine services and net repair areas. Pedestrian walkways will link these two activity hubs to each other and to other points of interest in the project area, including the National Register, City-owned Old Brick House and	Harrison	Yes	Yes	Yes	80	Yes	Yes	Yes	Yes	Yes		$ 35,000,000.00	$ -	
	Workforce Development	5460	12/24/2015	National Diabetes and Obesity Research Institute	On December 24, 2015, the National Diabetes and Obesity Research Center and Tradition-Medical City submitted Project #5460 to the RESTORE Project Portal. The information below is an update to Project #5460 based on a recent study and updated design and building estimates. The National Diabetes and Obesity Research Institute (NDORI), a Mississippi (MS) non-profit 501 (c)(3) corporation, is an innovative, translational research institute focused on the population-based study and treatment of diabetes and obesity, currently in its infancy. The singular focus of NDORI is to find a cure for diabetes - a disease that impacts more than 15% of MS's population. NDORI is located at Tradition, a 4,800-acre master-planned community in Harrison County at the intersection of Highway 67 and Highway 605 north of Biloxi and Gulfport. NDORI represents a unique opportunity to invest in the long-term health of the state, position the MS Gulf Coast as a regional leader in the growing health and life-sciences industry, create a catalyst for exponential economic growth, and promote community stability through development and investment. The concept would be one of the cornerstones of a healthcare, bioscience cluster: the Tradition Medical City. In spring 2018, Southern MS Planning and Development District (SMPDD) commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern MS to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; the final product of this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippi." Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development, and a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for future growth of NDORI and Tradition based on the success of other existing healthcare clusters at Lake Nona, FL, and the Research Triangle Park in NC. Based on these findings, NDORI and Tradition will make the MS Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the state and region. NDORI is strategically located in MS and serves as a natural laboratory positioned to address the effects of diabetes and obesity at the epicenter of incidence. The result of the investment in diminishing health disparities will have far-reaching impact in reducing health-related costs of Mississippians and	George, H	Yes	No	Yes	81	Yes	Yes	No	Yes	Yes		$ 57,000,000.00	$ -	
	Workforce Development	5465	2/16/2016	Computerized RESTORE	Developing Working Proposals to hire University Researchers and Marketers to address the RESTORE act and present the proposal 100% into dimensional sections for fundamental learners comprehensive training and developmental studies in progress. Each University Researcher that provide a biographical sketch, resume, CV etc. will be assessed to his or hers RESTORE ACT decision making teams. There will be implementation of US Military and International interventions and redesign ROTC Workforce Innovation Training and Development.		Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 18,000,000.00	$ -	

	Workforce Development	5505	8/11/2016	Gulf Coast Institute for Minority Leadership in Natural Resources	The Deepwater Horizon Oil Spill caused lasting ecological and socio-economic impacts in Gulf of Mexico (GM) and adjacent land resources. Efforts have been initiated to restore impacted ecosystems. Such restoration efforts will be long-term and itâ€™s imperative that a well-trained cadre of biologists with leadership skills exists to ensure that such restoration efforts continue, are consistent, ensure multiagency cooperation, and fulfill long-term goals. Itâ€™s imperative that demographics of these leaders are consistent with coastal constituencies. However, demographics of individuals in leadership roles in natural resources donâ€™t reflect the citizenry of Gulf Coastal States, nor even the U.S. The population of counties bordering GM was 12,523,710 individuals, representing 20.1% of population of the 5 Coastal States. Of these >12 million citizens, 42.6% are minorities, with 17.4% Black, 0.6% Native Peoples, 2.7% Asian, and 20% Hispanic/Latino. Natural resources in coastal counties adjacent to GM are critically important socio-economically and ecologically. Many state and federal agencies are charged with conserving these resources and itâ€™s imperative that those with leadership roles of these agencies reflect the citizenry who need these resources. Itâ€™s not sufficient to simply recruit minority leaders from universities. Their unique skills must be identified and nurtured during their B.S. education. There also exists many young professionals employed by federal and state agencies, who are candidates for leadership roles, and would benefit greatly from advanced training in leadership. Most of these professionals likely graduated from a traditional natural resources B.S. program. These programs emphasize organisms and habitats, and do not allow those select individuals to express and build on inherent leadership skills. Itâ€™s regrettable that most B.S. programs in natural resources in the U.S. emphasize animal and habitat management principles, with less focus on developing leadership skills. However, there is always a subset of individuals who display skills in leadership such as being presidents of professional organizations. The organismal and habitat emphases of university curricula often do not allow these â€œfuture leadersâ€to develop and build their inherent leadership skills. Individuals displaying these unique skills must be identified and â€œnurturedâ€. Mission Statement: Identify and train a subset of highly motivated professionals within natural resource management agencies and undergraduate students representing the 4 key minority groups within the Gulf Coastal States to understand federal and state government operations, federal and state policy development, administration, media interaction, advanced public		Yes	No	No		No	Yes	No	No	No			$ 15,662,208.00	$ -	
	Workforce Development	5538	6/1/2017	COMMERCE AND TECHNOLOGY CORRIDOR	With more than six miles of interstate frontage, the City of Gautier has access to only two interstate interchanges: One at I-10/Miss. 57 and one at I-10/Gautier-Vancleave Road. The City has experienced development pressure at the I-10/Highway 57 interchange, as evidenced by the following: 1) The planned widening of Highway 57 by MDOT 2) The construction of the Bienville Orthopaedics medical campus on East Lake Blvd./Allen Road and 3) Significant expansions of B&D Plastics, a manufacturing facility and 4) Sunplex Industrial Park access from this interchange. The City has recently taken out a $1 million CAP loan from the Mississippi Development Authority and expanded and upgraded a portion of Allen Road and renamed it East Lake Boulevard to accommodate the immediate development occurring in the area. The City has also received a commitment letter for $350,00 in DIP funding and $750,000 in a second CAP loan from MDA to construct a 300,000- to 400,000-gallon water tank. This water capacity expansion addresses the immediate needs of this area, but future planned expansions at Bienville Orthopaedics and other new developments will require additional water storage capacity. There is need for an additional 500,000-gallon water tank in this area. Currently, the City is utilizing 98 percent of its water capacity, so these upgrades are desperately needed. Also needed in this area are additional upgrades and widening of Allen Road/East Lake Boulevard and Dobson Road and improved geometrics with signalization at the access point from Highway 57. The City has had many inquiries regarding development within the area, which will complement and support the development that has already occurred. There are plans for a hotel, pharmacy, medical supply stores and restaurants to support the existing medical facility. The area where this development pressure is occurring was previously a rural area, annexed by the City of Gautier. As a result, the existing roadways are small roads that are hardly wide enough for two cars to pass each other, and they need to be expanded to accommodate the development. This area provides the opportunity for interstate frontage development, and the City has adopted a master plan for the smart growth of this area, which requires the installation of a water tank that the City is currently undertaking, and utilities in order to provide adequate levels of service for the anticipated growth of this commerce and technology corridor. The master plan includes new streets, expanding existing streets, drainage, lighting, a multi-use pathway, recreational amenities around the existing lake and other related improvements. Specifically, the project includes the following infrastructure improvements to accommodate development pressure and	Jackson	Yes	No	Yes	90	Yes	No	No	Yes	Yes			$ 11,000,000.00	$ -	
	Workforce Development	5548	4/12/2017	The SBCF New Wave Center for Innovation and Technology	Small Business Capital Fund of MS, Inc., (SBCF) is a 501c3 US Department of the Treasury Community Development Financial Institution (CDFI) that specializes in finance programs and technical assistance for MS businesses and has done so since 1994. As an administrator of several MDA small business assistance programs since the 1990â€™s, SBCF is uniquely qualified to address at least five of the eight key areas of focus of the GoCoast 2020 goals as set forth by Governor Phil Bryant in 2012. SBCF is most fortunate, as well, to have the full support and endorsement of Governor Bryant and his office with the submission of this request, and thereafter, if selected. The key areas that SBCF would address include: Workforce and Economic Development, Small Business Assistance, Research and Education and Infrastructure. If afforded this opportunity, SBCF would collectively address these areas by designing/building and operating a facility that would provide both incubator and accelerator services to coastal area start-up and existing businesses. Through an expansive technical assistance platform, SBCF would provide entrepreneurs and business owners with innovation tools and strategies, targeted access and approaches to research and resources, access to certain industry specific training and certification programs such as the ISO/IEC 27000 family of standards for cyber security to protect their IT environment as well as ISO 9000 training and certification to help organizations to most effectively and efficiently fulfill the needs of both their internal and external audiences while meeting statutory and regulatory requirements. SBCF would also work with large employers by facilitating personal development, guided self-help, programs for their employees such as, â€œYour fiscal self affects your physical self. Learn how, why and what to do about it.â€Though designed to assist employees with tools and information to address and correct credit and financial issues, the employer ultimately benefits as it eliminates use of company time and distractions handling personal matters resulting in increased productivity, bottom line and overall company morale. As the majority of efforts would be centered on infrastructure, SBCF would enhance its offerings to prime and subcontractors, public and private agencies and organizations in construction and transportation-related industries as well as provide access to complementary or peripheral services such as bonding agents and professional service providers that cater to those industries. It is SBCFâ€™s desire to assist with rejuvenating the MS Gulf by providing a space that will make way for the next wave of business leaders, startups, entrepreneurs and forward-thinking companies to excel by linking the knowledge and experience of the past with the innovation and technology of the future. In short, our project is Gulf coast eco-gardening at its best!	Harrison,Ji	Yes	No	Yes	60	Yes	Yes	No	Yes	No			$ 7,500,000.00	#######	
	Workforce Development	5729	8/15/2017	Harrison County Sheriff's Department Training Academy	The Harrison County Sheriff's Department Training Academy is a full-service training academy that offers basic certification and advanced courses in communications, corrections and law enforcement. The academy is a collaborative partnership between the Harrison County Sheriff's Department and the Mississippi Gulf Coast Community College. The instructor pool of the Academy is comprised of practitioners; ensuring attendees receive real, practical training. The current pool of cadets come from the private and public sectors spread throughout the entire State of Mississippi. The Academy also trains self-sponsored cadets that were unemployed upon enrollment and hired by Law Enforcement Agencies upon completion of the program; the agencies that hired the trained cadets are also spread throughout the state. The Sheriff's Department is currently leasing the property and facility where the Training Academy is held and is at capacity. The Sheriff's Department is seeking funding in order to build a state of the art Training Academy that will allow them to become a premier destination for law enforcement training in the Southeastern United States.	Harrison	Yes	No	Yes	90	No	Yes	No	No	No			$ 5,000,000.00	$ -	

	Workforce Development	5751	10/19/2017	USM Ocean Engineering and Unmanned Maritime Systems at the Port of Gulfport	Statement of Need: The State of Mississippi has made extraordinary investments in its marine science and education enterprise around the Port of Gulfport. The acquisition of the research vessel Point Sur was possible with support at the Port, and future growth of the maritime â€¯Blueâ€™ Economy will be fostered by academic research and education activities at the Port. The investments will yield results in economic and workforce development and emerging Unmanned Maritime Systems used by the US Navy, other federal agencies and industry. Statement of Work: The USM Port of Gulfport Marine Research Facility will be completed in Spring 2018, and the funds will be used to purchase state-of-the-art fabrication and engineering equipment, information and teaching technologies, building furnishings and ship support equipment. The building is constructed by Mississippi State Port Authority, and USm is entering into a long-term Lease Agreement to occupy the building. USM must provide all furnishings, information technology, research vessel support equipment and engineering/fabrication equipment. Detailed items for acquire will be submitted, but a general breakdown is provided here. Financial Request: Engineering/fabrication equipment ($1,170,000) Transport vehicles/lifting capacity ($500,000) Warehousing infrastructure ($100,000) Facility staff machinist start up ($200,000) Small boats shop ($75,000) Furnishings ($130,000) Information/teaching technology ($225,000) Total Request: $2,400,000	Harrison	Yes	No	Yes	50	Yes	Yes	No	No	No		$ 2,400,000.00	$ -	
	Workforce Development	5763	2/19/2018	Unmanned Maritime Systems Technology Program	Mississippi Gulf Coast Community College (MGCCC) seeks to work with interested partners in the development and implementation of an Unmanned Maritime Systems Technology Program to support businesses and industries that directly support the unique environmental and ecosystem structures of the coastal geography and the Northern Gulf of Mexico. The program will be located in Jackson County, Mississippi on the Jackson County Campus (JC) of MGCCC and will complement the existing career and technical programs on campus, a thriving local maritime industry, and a growing scientific community. The proposal herein will not be static and will be informed by and updated as directed by current coastal efforts associated with unmanned maritime systems, inclusive of the work of the Governorâ€™s Ocean Task Force. MGCCCâ€™s Unmanned Maritime Systems Technology Program will be a technical education program that will provide students with the opportunity to become employed in a growing industry . Information provided by the Duke Center on Globalization, Governance and Competitiveness indicates that the industry is a $156.9 million-dollar industry that is growing at a rate of 13.8% annually. The program will contain classroom, lab based, and field-based instruction and will seek out industry and university partnerships in support of the program. Courses will focus on systems IT, systems maintenance, systems operations, systems security, systems manufacturing, systems usage, troubleshooting, and the industry in general. The program location will be on the collegeâ€™s Jackson County Campus (JC). The campus is located in Gautier, Mississippi; logistically accessible from both Interstate 10 and Highway 90. The location makes it feasible for on-site programs to serve Mississippiâ€™s coast and the region beyond. Programmatically, the campus is home to academic transfer programs, workforce training programs, career, and technical programs. Programs such as programs in electronics, instrumentation and controls, systems-based electronics, and automation are complimentary programs to an Unmanned Maritime Systems Technology program. Additionally, JC is home to the collegeâ€™s Estuarine Education Center (EEC); a 40+ acre development along Mary Walker Bayou which grants water access to the Pascagoula River, the accompanying estuary systems and the Gulf of Mexico. Within the EEC are facilities offering classrooms, science labs, and industrial facilities that can/will house equipment for the operation of an Unmanned Systems program. The timeframe for development and sustainability attainment will be a period of 5 years, with year one being the development period and years 2 â€“ 5 being instructional years. It is anticipated that at the end of the 5-year period that the program will be	Jackson	Yes	No	No		Yes	Yes	No	No	No		$ 4,663,914.00	$ -	
	Workforce Development	5780	5/21/2018	Ocean Springs High School Aquaculture Expansion	This project will be based on the addition of two fully equipped greenhouses at Ocean Springs High school. By adding these new greenhouses, Ocean Spring High School (OSHS) will be able to increase the number of students who take aquaculture classes at OSHS, and it will also successfully maintain the program for 3-4 years. This past year, 89 students signed up to take Aquaculture. At the current size, full capacity is 36 students (18 per class) and 18 students for aquaculture 2 classes. The addition of two new greenhouses would give each class its own building. This would increase class sizes from 18 students to 25 students in each class for a total of 75 students per year. These students will be trained and graduate with work force skills in aquaculture, water quality, and any marine fisheries job that may become available. The program also focuses on eco-restoration. In the past, the program has raised, oysters, blue crabs, speckled trout, tilapia and striped bass. The oysters, blue crabs and speckled trout were released in the Mississippi Sound. With the addition of the greenhouses, other species will be evaluated to be included in the program. The greenhouses are also used in collaboration with kindergarten and fourth grade students as they come to the high school and learn systems with planting and raising fish. Students then grow these plants in smaller greenhouses and eat what is grown. In addition to these greenhouses, a smaller greenhouse will be opened to the special education department. This greenhouse will be used by their students to grow vegetables and other resources to use in their classes.	Jackson	Yes	Yes	Yes	17	No	Yes	Yes	No	No		$ 290,000.00	$ -	
	Workforce Development	5795	7/20/2018	Urban Natural Resource Job Training	The MS Urban Forest Council developed a project in 1995 with EPA, creating a program to help people learn about careers in the green industry and provide job training opportunities in regard to natural resources such as landscaping, trees, food plants, growing food, land maintenance, cut flowers, and other "green jobs." The program was called 'Ribbons of Green Career and Job Training.' We are proposing this project to assist in restoring the MS Gulf Coast from injury of natural resources but also to provided valuable job training and career development. Many people are not aware of the many opportunities working with natural resources. Natural Resource Job Training and Small Business Incubator The project will include job training in the classroom and training on sites. Site for training will be identified based on topic of training, location of participants and relative to the topics. This community garden and farming space is the perfect location for a job training and small business incubator center. Not only will this project provide real-time economic opportunities to the trainees; it will also help develop and revive the surrounding communities, while rebuilding and growing the green industry along the MS Gulf coast. This project would create training programs that satisfy needs of employers in the state. The following programs would be implemented: Job training and certification as a trained individual would be provided for each of these topics. Individuals participating will complete the whole training program. Trainers will provided assistance in obtaining jobs in these areas of service or be trained to develop their own company to provide these service areas. 1. Farming-Food, vegetable, fruit and herb production a. Vegetable growing and harvesting b. Nursery training (growing seedlings & fruit tree propagation)		Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ 323,000.00	#######	

	Workforce Development	5855	10/25/2018	William Carey University College of Osteopathic Medicine at Tradition	William Carey University is a private, non-profit university with an in-depth history in the State of Mississippi, dating back to 1892. William Carey University (William Carey) provides quality educational programs, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society. William Carey currently has campus locations in Hattiesburg, MS, the Tradition Medical City in Tradition, MS and in Baton Rouge, LA. William Carey has a vast amount of educational offerings that can be found in the following colleges and schools: College of Health Sciences, College of Osteopathic Medicine at Hattiesburg Campus, School of Arts and Letters, School of Business, School of Education, School of Music and Ministry Studies, School of Natural and Behavioral Science, School of Nursing, and School of Pharmacy. William Careyâ€™s Tradition Campus, which opened in the fall of 2009, offers majors in art, business administration, elementary education, health related professions, nursing, and psychology. The University has recently reached a significant milestone with its School of Pharmacyâ€™s completed construction and its inaugural class of 57 students admittance this past July, with the capacity of 192 students and the creation of 34 new full-time equivalent jobs. The School of Pharmacy offers a three-year accelerated Doctor of Pharmacy program with an innovative curriculum that provides students with the knowledge and skillset required to excel as an entry-level practitioner. William Careyâ€™s School of Pharmacy is determined to make a difference in the lives of those who suffer from health issues such as diabetes, obesity, drug and tobacco addiction and asthma. In the spring of 2018, Southern Mississippi Planning and Development District commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern Mississippi to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippiâ€ Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development and serve as a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for the future growth of William Carey University and Tradition based around the success of other existing business and industry clusters at Lake Nona, Florida, and Research Triangle Park in North Carolina. Based on these findings, the continued growth of William Carey and Tradition will make the Mississippi Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the region and the state.	Harrison	Yes	No	Yes	83	Yes	Yes	No	No	No		$ 60,000,000.00	$ -	
	Workforce Development	5861	11/14/2018	Biloxi Career and Workforce Training	The Biloxi Career and Workforce Training (BCWT) program evolved from an economic security grant funded by W. K. Kellogg Foundation and awarded through East Biloxi Community Collaborative. We are requesting funding to continue the Biloxi Career and Workforce Training program which will include two sessions, Spring 2019 and Fall 2019 to Biloxi residents ages 18-50. Each participant must complete a Career Readiness course prior to advancing to Electrical and General Construction. The career readiness curriculum includes training specific to financial awareness, basic computer skills, resume writing, interviewing techniques and credit reporting. OMS Knights of Peter Claver, Council 25 provides a weekly electrical class which is held each Thursday for 10 weeks. The goal of the electrical training is to advance participants to Helper/Apprentice level. The electrical curriculum content is presented from NCCER Electrical: Level 1. Curriculum consists of: OSHA safety, construction math, blueprint reading, basic electrical training, wiring, identification of tools and materials, cost and material estimation and in-the-field training experience. Additionally, OMS Knights of Peter Claver, Council 25 provides a weekly general construction class. General construction training class is held each Saturday for 10 weeks. The goal of the general construction training is to advance participants to Helper/Apprentice level. The general construction content is presented from NCCER Core Curriculum: Introductory Craft Skills. The general construction curriculum consists of: OSHA safety, construction math, blueprint reading, basic construction skills, identification of tools and materials, cost and material estimation and classroom/in-the-field training experiences. Participants conclude the training by visiting worksites to practice job and environmental safety.	Harrison	Yes	No	No		Yes	Yes	No	No	No		$ 30,000.00	########	
New	Workforce Development	5878	4/17/2019	Biloxi Upstream and Downstream Storm Water Education and Community-Engaged Green Infrastructure	The people that live, work and visit the Biloxi peninsula are all within a few hundred yards of the Biloxi Back Bay or the Mississippi Sound and their actions have immediate impacts on the environment because all the stormwater runs into marine water either directly or by way of one of several bayous leading to the Back Bay. In the past few years most of the streets and the storm drainage systems on the peninsula have been or are being replaced, a situation that is positive as far as moving stormwater out of streets but will increase the stormwater impact on the bayous and back bay with more and faster moving storm water. What is more, the construction work itself has impacted the natural waterways due to increased silt running into the bayous from unpaved roads. The time for the Biloxi peninsula is right for a comprehensive community-engaged stormwater management campaign that improves and creates both upstream and downstream green infrastructure. Upstream, the project will improve the quality and quantity of water that enters the storm drainage system with four related activities: 1. Environmental education with Biloxi Public School students 2. Stormwater education to residents of the Biloxi peninsula 3. Low-impact development training and design resources for developers and city staff 4. A property owners small-grant program to do on-site and neighborhood-scale green infrastructure projects. Downstream, the project will improve the stormwater quality and quantity that enters the marine environment with two related activities: 1. Restoration and improvements of natural waterways that connect storm drainage to the Back Bay, especially Keegan Bayou and Bayou Auguste, which have been impacted most by the road construction work. 2. Coordination and leveraging of on-going and planned projects to bring green infrastructure planning and funds to install and maintain landscape areas Environmental education with Biloxi Public School students. For the past seven years GCCDS has developed and implemented educational outreach programs with Biloxi Junior High School, East Hancock Elementary, St. Martin High School, and with middle school students in the Gulfport School District. During the summer of 2017, GCCDS received funding through the National Marine Sanctuary Foundation in partnership with NOAA to further modify the curriculum for a summer program with the Boys and Girls Club of Hancock County. Measures of success: Over 400 students and teachers reached through direct programming with several hundred more potentially reached through exhibitions of work to parents, local leadership and the larger community. Outcome: Change of behavior for students, their families and larger community to reduce trash and pollution	Harrison	Yes	Yes	Yes	60	Yes	Yes	No	No	No		$ 2,080,000.00	$ -	
New	Workforce Development	5946	11/25/2020	Gulf Coast CSET Tech Fusion - Advanced Technology Training for the 21st Century	In the new Millenia, the evolution of digital technologies has radically changed the way we live and work. This revolution has also changed the demands that citizens, businesses, and other organizations have placed on the digital society. However, the Mississippi Gulf Coast faces a severe lack of well-trained IT workers. Gulf Coast Tech Fusion will focus on developing an IT workforce for economic expansion, innovation, and societal growth. Tech Fusion will bring together a dual focus within the CSET building: (1) provide IT training and (2) provide flexible facilities to develop IT solutions for the development and implementation of regional business technology solutions. and industry. Gulf Coast Tech Fusion will provide to students requisite training in emerging technologies (e.g., Cybersecurity, Coding, Artificial Intelligence (AI), Virtual Reality (VR)/Augemented Reality (AR), and Simulation/Game Design) that could make the Gulf Coast region an international leader in the high-tech sector. This program would provide momentum to accelerate a trained IT workforce and opportunities for business and industry to upskill incumbent workers. For example, MGCCC is partnering with EON Reality to create a center of excellence for extended realities (XR); XR is an umbrella term for all immersive technologies, such as AR, VR, mixed reality (MR), and those that are still to be created. This program would help to develop the next generation of talent to develop these technologies, and it would provide support to companies to explore and develop training via XR. As for future-proofing, a push to identify a center of excellence to create AR and VR training is now critical. This would allow training to continue in spite of any external factors that may come requiring remote worker and/or social distancing. Gulf Coast Tech Fusion will be housed in the Center for Security and Emerging Technology (CSET) â€“ further leveraging a BP Restore project (i.e., CSET). The CSET building received partial funding in an earlier round of BP Restore projects, so this proposal includes the request to fund the remainder of the CSET building. Operating Tech Fusion in CSET will provide Mississippi Gulf Coast Community College (MGCCC) with a platform to conduct cutting-edge IT training and develop solutions for local businesses and industry. The region must invest in equipment and infrastructure to facilitate this training, future-proof the Mississippi Gulf Coast, and better mitigate unexpected disasters in the future. Specific spaces within CSET will be used for corporate training and development, while other areas of CSET will focus on credit instruction in IT. In some areas, the training needed above may require that equipment be purchased to facilitate the training. MGCCC will create technology enhanced (aka, HyFlex) classrooms that allow for seamless synchronous communication with students/incumbent workers remotely. That is, the HyFlex classrooms will allow students and incumbent workers to remotely engage in the class and/or training.	Harrison	Yes	No	No		Yes	Yes	No	Yes	No		$ 7,000,000.00	#########	

	Research and Education	24	10/21/2013	Monitoring Population Ecology of a Critical Coastal Bioindicator, the Mississippi Diamondback Terrapin (Malaclemys terrapin pileata)	The Mississippi diamondback terrapin (Malaclemys terrapin pileata) is an estuarine turtle that exclusively inhabits coastal bays and salt marshes along the Atlantic and Gulf of Mexico coasts. It is considered a keystone species that contributes to the maintenance of salt marsh integrity. Terrapins were once abundant throughout their range; however, knowledge gaps exist regarding the viability of populations in many areas of the Gulf coast, including Mississippi. Numerous threats adversely affect terrapin populations including habitat loss, crab trap mortality, and nest predation. In addition to these current threats, pollution from the Deepwater Horizon oil spill degraded vital salt marsh habitats in the northern Gulf of Mexico. Monitoring a long-lived species in a disturbed environment can provide insight into the extent of damage to the particular species along with its habitats and prey. Because the diamondback terrapin is a long-lived species and plays an important role in these estuarine habitats, it represents a critical bioindicator of the health and integrity of salt marsh ecosystems. Salt marshes in Mississippi provide both ecological and economic gains to the stateâ€™s residents; therefore, monitoring the status of a bioindicator of these important habitats will benefit the state. Long-term surveys of diamondback terrapin populations in Mississippi were initiated in 2012, and these surveys are conducted in both salt marsh channels and nesting beaches. The surveys will continue to monitor the health, reproductive success, and population ecology of the diamondback terrapins so that an adequate assessment of short- and long-term damage to this declining species and its vital habitat can be made. This project will be a collaborative partnership between the Institute for Marine Mammal Studies and the University of Alabama at Birmingham.	Hancock Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -		
	Research and Education	25	10/21/2013	Enhancement of IMMS Public Outreach and Education Programs	The events surrounding the Deepwater Horizon oil spill stressed the need for having a well-informed citizenry regarding marine conservation and restoration. A key to this goal is to support education and outreach programs whose mission is to teach the public about the great natural resources of the Gulf of Mexico. The Institute for Marine Mammal Studies â€" Center for Marine Education and Research (IMMS-CMER) is a premier marine education and conservation facility that offers a variety of educational programs designed to meet the academic and outreach needs of multiple audiences on educational topics including marine mammals, sea turtles, fish biology, marine invertebrates, threatened/endangered species, invasive species, point and non-point pollution, marine habitats, and water quality. Our current educational programs consist of: - Student camps that provide hands-on exploration of coastal wetlands, beach and barrier islands, birding, and fisheries, - Academic field-trips designed to familiarize students with the plants, animals, habitats, and processes of marine and aquatic environments tailored to the visiting age group, - Teacher Workshops provide teachers with opportunities to expand their knowledge of coastal issues and provide a venue for teachers to earn continuing education units (CEUs) or college credit, and - College field courses that expose students to applied marine science and marine mammal and sea turtle rescue and rehabilitation. IMMS seeks to continue and enhance current educational and outreach programs while actively engaging in development of new programs to educate the public. These include: - Ecotours to provide unique, hands-on field experiences - Technology labs to introduce students to modern research techniques - Exhibit enhancements for our public Discovery Room facility - Outreach capabilities for community festivals and events Investing in public education regarding marine conservation issues will contribute to ultimate goal of a restored and healthy Gulf of Mexico for generations to come. IMMS is committed to fostering a sense of appreciation and stewardship for the great coastal and marine resources in Mississippi and the Gulf of Mexico for those young and young at heart.	Hancock Harrison, Jackson	Yes	No	No	Yes	No	No	Yes	15	No		$ 3,000,000.00	$ -		
	Research and Education	103	11/12/2013	Southern Mississippi Applied Restoration Toolkit (SMART): Coastal restoration vulnerability assessment and prediction	Barrier Islands and marshes serve as buffer zones and filters between the Gulf of Mexico and mainland human population centers and infrastructure, protecting these communities from the most devastating impacts of oil spills. Mississippi (MS) barriers and marshes themselves are also some of the most popular tourist and recreational destinations along the Gulf Coast. Furthermore, they support diverse mico-, mieo-, and macrofaunal communities and provide a wide range of ecosystem services. Over historic time, the MS barrier islands and marshes are eroding rapidly primarily due to a combination of accelerated relative sea-level rise, hurricane impacts, and anthropogenic influences coupled with a marked decrease in sediment delivered to the coast. These factors are expected to have a continued widespread impact for the coming decades along the MS coast. Therefore, our vulnerability to future oil spills might be increasing significantly, not to mention additional adverse effects associated with loss of these coastal environments. Numerous coastal restoration projects in the state of MS have been proposed to meet the RESTORE program goals. For example, some of these efforts aim to restore hydrology patterns, dune fields, marshes, vegetation, barrier islands, and forests covering 10â€™s of thousands of acres. These will truly be large efforts, and highlight the importance of these environments towards mitigating future risk. However, in order to fully remedy harm and reduce risk to the MS Gulf Coast natural resources, a detailed understanding of the balance between sediment supply, sea-level changes, and hurricane impacts is of crucial importance. Without this, many of these projects could potentially see short-lived success. This information could thus be used to better plan these restoration efforts, and make them more successful in the long-term, in addition to understanding current and future vulnerability.	Hancock Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 4,905,000.00	$ -		
	Research and Education	1157	9/26/2011	Bayou Auguste Environmental Enhancement and Wetlands Project	(ORIGINAL ID#11193) Bayou Auguste Environmental Enhancement Project is designed to protect and enhance Bayou Auguste. In the aftermath of the oil spill, BP affirmatively acted to protect this delicate area from harm therefore both parties have recognized the environmental importance of this body of water. The goal of the project is conservation and restoration of the waterway to it natural function as a tidally influenced water body. A secondary benefit is enhancement of public awareness of the Bayou's environmental importance via a trail along its banks. The total project funding sought from BP, PLC would be $685,000. The City of Biloxi has been working with the Gulf Coast Community Design Studio (GCCDS), Biloxi Housing Authority, Biloxi Public Schools, and the Land Trust for the Mississippi Coastal Plains in their effort to enhance and restore Bayou Auguste. The goal of this work is to conserve and restore Bayou Auguste to its natural function as a tidally influenced water body, and to enhance public access to the Bayou through the means of a trail along the banks. Water quality not only in the bayou but also in Back Bay will be improved by restoring the bayou's effectiveness as a natural filtration system for stormwater runoff and will enhance the ecosystem of the bayou to support marine and wildlife habitat, wetland restoration and public access. This project will include removal of riprap along the banks, removal of the Old Bayview Ave Bridge and re-grading of the Bayou banks to remove sedimentation thereby returning the Bayou to a more natural flow which will increase stormwater retention capacity. In these areas of riprap removal and re-grading, marsh restoration will also occur which will include the removal of invasive plant species to be replaced with native wetland plants. This will improve the natural ecosystem and provide for improved stormwater runoff pollution removal capabilities which will result in better water quality in the bayou and Back Bay. An educational walking trail will be installed along both the North and South sides of the bayou to provide safer public access to the bayou. This trail will include boardwalks, walking trails, observation platforms and signage identifying native plant and animal species. The trail will begin upstream along the bayou and will end at Back Bay Blvd. This will help to increase the public awareness of and appreciation of the Coast's natural resources such as wetland plant and animal species unique to the bayou ecosystem.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 685,000.00	$ -		

	Research and Education	1159	6/9/2011	Ocean Expo Learning Center - A World Class Aquarium	(ORIGINAL ID#10101) The Institute or Marine Mammal Studies will construct a 175,000 square foot Ocean Expo Aquarium Complex on 11.5 acres at the southwest quadrant of the intersection of Interstate 10 and Interstate 1-110 in D'Iberville, Mississippi. Ocean Expo will be a public educational and tourist destination that will support and accommodate the following education programs: Place emphasis on dolphins and other marine mammals, both in the wild and in captivity, provide students and the general public with an opportunity to learn about nature and marine life, and combine elements of aquatic displays, presentations, and unique interactive exhibits that will make learning fun. The Ocean Expo will be an internationally recognized institution promoting education, conservation and research while providing recreation to people of all ages. The facility will replace Marine Life Oceanarium, the well known landmark that was destroyed by Hurricane Katrina. This project will be a major economic development project that will create a family destination attraction. This plan as the "Gateway to the Gulf" will beautify the area and increase tourism while providing educational and interactive learning experiences. The Institute of Marine Mammal Studies (IMMS) is a non-profit organization established in 1984 for the purpose of public education, conservation and research of marine mammals in the wild and under human care. The Center for Marine Education and Research provides a place for IMMS to fulfill its mission and share its work with the public. The IMMS is a stranding network participant that currently holds a USDA/APHIS Exhibitor's License. The Ocean Expo will continue this purpose through its stranding and rehabilitation services. The City of D'Iberville has partnered with Dr. Moby Solangi's Ocean Expo Aquarium project. In this partnership, the City has been presented with a great opportunity, but also significant challenges regarding the financial investment made by the City. The foremost of these challenges is the acquisition of land and necessary infrastructure improvements. The City is requesting approximately $10,000,000 from BP for land acquisition and pertinent infrastructure improvements. The Ocean Expo will enhance marine education and environmental stewardship; we can truly discover the wonders of the Gulf.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 12,000,000.00	########	
	Research and Education	1160	7/8/2013	Ocean Expo	(ORIGINAL ID#12023) Co-Venturing with Ocean Expo/IMMS a future phase of the Ocean Expo Aquarium and learning/Marine Education Center to help build out this one-of- a- kind coast attraction. This project will replace the landmark Marine Life Oceanarium, which was one of the most popular family attractions on the Mississippi Gulf Coast prior to Katrina. Funds will be used to provide infrastructure support such as a salt water pipeline, additional land, roadways, parking, and enhancement of exhibits $10.0-M. This project is consistent with at least four (4) of the eight (8) eligible requirements of the Restore Act and GoCoast 2020. . $10.0-M	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 10,000,000.00	########	
	Research and Education	1176	9/26/2011	USM Marine Education Center at Cedar Point	(ORIGINAL ID#11197) This project consists of a University of Southern Mississippi Marine Education Center at Cedar Point ($2 million; complete building, walking trail to Davis Bayou on Cedar Point).	Jackson	Yes	No	No	Yes	No	No	Yes		No		$ 2,000,000.00	$ -	
	Research and Education	1198	8/25/2011	The Development of The Advanced Real Time GNSS and Physical Atmosphere and Ocean Observing System within the Gulf of Mexico	(ORIGINAL ID#923) The Development of The Advanced Real Time GNSS and Physical Atmosphere and Ocean Observing System within the Gulf of Mexico Conrad Blucher Institute for Surveying and Science Texas A&M University-Corpus Christi & University Corporation for Atmospheric Research Boulder, CO & Center for Space Research University of Texas at Austin Introduction: The ability to observe our environment in real time significantly increases our capacity to anticipate and respond to changing conditions that may increase the risk of injury and property damage. The installation of a network of instrumentation clusters is proposed for the Gulf of Mexico. The primary instrument of each cluster will be a geodetic quality Global Navigation Satellite System (GNSS) receiver. Observations derived from this network will promote research on ocean-atmosphere interactions; hurricane intensity forecasting; sea level and coastal subsidence monitoring; and storm surge modeling. Each of these topics was given high priority in a recent survey of the oil and gas industry operating in the Gulf . It is anticipated that equipment can be deployed on both fixed and floating platforms, significantly improving the observational capability of the region. The deployment of this instrumentation on offshore platforms would allow these research topics to be addressed and combined in a unified measurement system throughout the Gulf region. Advances in GNSS analysis techniques now enable the continuous positioning of mobile instrumentation to less than a few centimeters. The precision of this measurement can be used for continuous monitoring of sea surface height, tides, and wave motion. The addition of both temperature thermistor strings and underwater acoustic instrumentation provides a link to sea surface temperatures and ocean bathymetry. These same analysis techniques are able to measure the delay of GNSS signals as they pass through the atmosphere. This delay can then be related to the integral of atm ospheric water vapor. This establishes a link between the sea surface temperatures and the latent heat in the atmosphere that contributes to hurricane intensity changes. The recent environmental disaster following the sinking of the Deepwater Horizon offshore drilling rig has highlighted the need for more ocean observing systems to better measure the physical processes occurring in the Gulf of Mexico. Scientific measurements in this harsh offshore environment are difficult to obtain and cannot be undertaken without access to the large number of offshore platforms owned and operated by the offshore industry. This white paper proposes a partnership between the private offshore industry and the scientific community to collect critical physical data to enhance our knowledge of the atmospheric and oceanographic processes that drive the forces that interrupt our ability to manage the vast economic and natural resources of the Gulf of Mexico. Figure 1: Proposed GNSS network in Gulf of Mexico (yellow). Existing GNSS stations used to estimate PW (precipitable water vapor) are shown in black and red. A collaborative research group, consisting of academic and governmental researchers, has expressed interest in the establishment of this Gulf network. The members of the group have diverse expertise	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 16,000,000.00	$ -	
	Research and Education	1200	10/15/2012	FishSmart: Building Sustainability in the Snapper and Grouper Recreational Fisheries and Associated Industry in the Gulf of Mexico	(ORIGINAL ID#11834) Justification: The Deepwater Horizon Oil Spill substantially impacted recreational fisheries and their supporting industry in the Gulf of Mexico. Responses to a questionnaire following the spill indicated that nearly all surveyed fishing equipment retailers experienced reductions in their monthly sales, with the majority reporting losses of greater than 50%. Bookings for charter fishing trips and other associated recreational businesses plummeted. Even though some fish stocks such as red snapper are now showing signs of rebounding, NOAA Fisheries noted that as the population grows and the fish get bigger, recreational fishermen are likely to catch their quota faster, resulting in even shorter fishing seasons. This will translate into reduced recreational fishing trips, further reductions in tackle and equipment sales, fewer bookings for charter business, and generally lower economic viability for many recreational fishery-related businesses still trying to recover from the oil spill. Mandatory catch and release due to regulations will result in a slower stock rebuilding process and be a continuing drag on the recreational industry if anglers are not engaged to adopt Best Practices (tools and techniques to avoid catching fish that must be released combined with tools and techniques to improve the survival of recreationally caught and released fish). Objective: To increase angler adoption of Best Practices thereby advancing the sustainability of fish stocks and potentially extending fishing opportunities, anglers must be aware of practices that have proven successful. In four Gulf states alone (Florida, Louisiana, Mississippi, and Alabama) anglers released more than 4 million snappers (1.5 million of these red snapper) in 2011. Using conventional release techniques, between 15% and 40% of released red snapper do not survive, depending on depth at which they were caught, water temperature, and other factors. Increasing the survival of these by a few percent will result in a tremendous conservation benefit to fish stocks and eventually increase sustainable fishing opportunities and economic benefits from recreational fishing. From 2008-2013, anglers were required by Federal fisheries authorities to use release devices and to vent fish (remove gases from the fishes body to enable it to return to habitat depth on its own) that they release in an effort to improve survival. However, findings of the ?2012 FishSmart Workshop on Improving the Survival of Released Fish concluded that use of recompression (returning a fish to depth without invasive procedures involved with venting) may be equally effective in improving the survival of released fish. Whether venting or recompressing, it is imperative that anglers are knowledgeable of the best scientifically-based information and implement Best Practices that minimize interaction with the fish that must be released and maximize the survival of those fish that are caught and released. This is not only a sound conservation practice, it is also good for business since reductions in mortality will eventually be reflected in longer seasons and/or larger bag limits that provide more angling opportunities. However, increasing survival is dependent on educating the anglers who interact with and handle the fish. Approach: The project will consist of four primary aspects to educate anglers to	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		Yes		$ 20,000,000.00	$ -	
	Research and Education	1206	4/25/2012	Introduction and Evaluation of New Designs of Propellers and Nozzles in the Gulf Shrimp Fishery for Enhanced Efficiency and Fuel Economy	(ORIGINAL ID#11680) A combination of increased operating expenses and reduced ex-vessel prices for catch has created a perfect storm of economic hardship in the Gulf Shrimp Fishery. The fishing industry has worked to reduce costs of operation, but unfortunately, few new avenues for this exist. One major cost to the shrimp industry is fuel and there are potential avenues to reduce fuel consumption aboard vessels. One of these is improved propellers and nozzles for propulsion. A recent collaborative evaluation aboard one vessel by Texas A&M Sea Grant researchers and a shrimp company showed that fuel consumption was reduced by approximately 28% when replacing a traditional Kaplan propeller with a Rice Speed Propeller and match Speed Nozzle. These results closely resembled that of a similar study performed in Australia where 25% fuel savings was achieved. An older study showed a 5% reduction in fuel by changing only a Kaplan style propeller with a skewed propeller design without modification of the propeller nozzle. The scope of this project will involve rigging out several collaborating vessels throughout the Gulf of Mexico with new designs of propellers and nozzles (different from the traditional Kort nozzle). Evaluations of fuel savings potential during actual fishing conditions will be performed utilizing fuel flow meters. As many offshore trawlers are now encountering fuel bills of over $200,000 per year, demonstrations with this new technology could provide significant savings to the industry and contribute to our nation's goal to reduce fuel consumption. The results of this project will be shared with the fishing industry throughout the Gulf through printed reports, local workshops, and through direct contact with industry.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	No	No		No		$ 750,000.00	$ -	

	Research and Education	1207	4/25/2012	Development and Distribution of Gear Technology to Improve Fuel Economy and Reduce Bycatch in the Gulf Shrimp Fishery	(ORIGINAL ID#11678) The offshore shrimp trawl fishery accounts for a significant portion of landings in the Gulf of Mexico. Due to a multitude of events (i.e. hurricanes, oil spill, imports), the fishery has seen a substantial decline in fishing effort while operating costs have continuously risen. With increasing fuel prices, fuel saving technologies are a logical avenue to assist in reducing operating expenses. A paucity of information exists documenting the effect of gear technologies on fuel consumption. Cambered trawl doors are currently being utilized by some fishermen in the southeastern United States. These trawl doors have evolved significantly over the past decades, but until recently have not received much attention in the southern shrimp fishery. Evaluations of these doors have yielded promising potential to reduce fuel consumption in the shrimp fishery. Several door sizes have been evaluated, but cambered trawl doors, 50% smaller than the traditional wood or aluminum doors, are documented to have fuel savings of 25-30% during actual fishing conditions. Additionally, bycatch reduction remains a high priority issue in the southeast. Reducing incidental bycatch has been shown to improve catch quality and reduce fuel consumption. We propose to conduct a series of experiments aimed at documenting the fuel savings achieved by cambered trawl doors and continue to improve the bycatch reduction capability already in use in the fishery. More specifically we aim to: 1) Evaluate cambered door gear technology within the southeastern shrimp trawl fishery; 2) Continue to elicit industry participation in evaluating more complex bycatch reduction devices (BRDs); and 3) Conduct result demonstration and dissemination activities of the newly documented gear (doors & BRDs) to shrimp fishermen throughout the southeast to increase the acceptance and use of these gears. Through years of experience, we have found that informal meetings are an optimal forum for information dissemination; providing less volatility from industry and allowing for an effective one-on-one exchange of ideas. As such, we will convene a series of informal meetings throughout the southeastern US to disseminate the results of this study. By continuing our research and development efforts to reduce bycatch within the shrimp trawl fisheries, commercial fishermen will become actively involved in BRD research and development and will be more accepting of those devices tested.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,500,000.00	$ -		
	Research and Education	1208	6/22/2011	Saving the Gulf Coast one bale at a time.	Our process is a larger scale version of what is being used in construction areas along our roadsides throughout the United States. Small square hay bales are used in construction sites to prevent soil runoff. Our process uses large 4' X 5' round bales of hay that weigh approximately 800-1000 lbs each, to form a barrier along shorelines and marsh edges that are in need of protection from erosive wave energy. The barriers will wick/trap sediment and ultimately contribute to the creation of "new" soil. This forms a more natural buffer against erosive waves when compared to rocks, concrete, or metal structures that are traditionally used for erosion control. An advantage of using a 4-5 ft. soft natural barrier is the bales serve more effectively by raising the height level for natural absorption. The bales act as a natural sponge that absorbs the water to help dry out and stabilize the soil. Hay is used in many situations for erosion control with the use of blankets/mats, spraying of chopped hay and as mentioned, small square bales. Using a large round bale is a completely new approach that has never been applied. 50' barriers will be placed along the shoreline in need of protection from erosive wave energy. When the waves approach the shore, the hay filters and traps the captured sediment. Over time the sediment build up forms a solid barrier to protect eroding shores and bank lines that will revegetate over time or purposely plant with desired vegetative species. Bales can also be injected with selective seeds or plugged with native plant seedlings to stimulate vegetation growth. Consider the size and weight of the hay bales that are used to build the barriers. There is a double row of bales 50' long. This becomes a 80,000 lb. wall, 50' long by 10' wide by 5' tall. Immediately, the hay begins to absorb water and silt and weighs even more. Eventually what you have is a natural levy/ridge. The collection of silt in the tightly rolled hay that forms the bale creates "mud" to keep the straw together and prevent the hay from disintegrating. Construction and Installation Construction and installation is streamlined. Very little material and equipment are needed for this process. * Hay * 2 work boats * Jig * Forklift * Treated post (size determined * Work crews/laborers	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 250,000.00	$ -		
	Research and Education	1209	7/12/2013	Emergence, persistence, dynamics, and consequences of White Spot Syndrome Virus in a salt marsh edge crustacean community after the DWH event	(ORIGINAL ID#12029) This project seeks to elucidate the causes and consequences of the emergence and persistence of the non-indigenous white spot syndrome virus (WSSV) in a community of 8 decapod crustaceans in salt marsh edge habitat in the northern Gulf of Mexico (NGOM) following the DWH event. WSSV is a severe pathogen of salt marsh crustaceans, including fiddler crabs, mud crabs, grass shrimp, blue crabs, and penaeid shrimp. WSSV has increased in prevalence since the DWH event and the consequences for the salt marsh crustacean community are significant. WSSV emergence in the MS salt marsh community parallels the emergence of VHS virus in Pacific Herring following the Exxon Valdez event in Prince William Sound. The project will use a combined field, population genetic, molecular phylogeographic, experimental, and modeling approach to address hypotheses concerning the emergence, persistence, dynamics, prevalence, and consequences of WSSV in the community.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 4,000,000.00	$ -		
	Research and Education	1211	6/29/2011	GCRL: Marine Education Center	(ORIGINAL ID#400) The University of Southern Miss through its Gulf Coast Research Laboratory is preparing for the development of a $20 million state-of-the-art Marine Education Center on the University's Cedar Point Teaching Site in Jackson County, Mississippi. Before the loss of its J.L. Scott Marine Education Center during Hurricane Katrina, the Gulf Coast Research Laboratory established a long and rich history of providing quality marine education to students, visitors and coastal residents of all ages. Building upon these traditions, this proposed new replacement marine education and outreach center will be the model for connecting people to the Gulf of Mexico, its resources and attributes while providing an understanding of how they impact our daily lives. The proposed GCRL: Marine Education Center will include 36,000 square feet of live animal exhibits, hands-on activities, classrooms and laboratories into its ongoing education programs. The Cedar Point location will provide extensive opportunities for outdoor environmental education and recreation The Center is a professional learning community whose programs reflect current coastal science research conducted within the Gulf of Mexico. The Center provides an understanding of both the role the Gulf of Mexico plays in our daily lives and how a science based understanding of the fundamental issues of ecosystem health; resiliency and restoration will allow us to develop policies and frameworks necessary to sustain a healthy Gulf. The Center and its educational program's will provide the public with access to ongoing research efforts in order to achieve a better understanding of data collection, analysis and interpretation as well as the role of science and scientific knowledge in making decisions on the management of the Gulf of Mexico's post Deepwater Horizon spill recovery efforts. Since the beginning of the Deepwater Horizon oil spill residents living along the Gulf of Mexico coastline, as well as the United States populatio n as a whole, have been seeking accurate and specific information regarding the spill's environmental impacts within the Gulf of Mexico's vast and diverse environmental community. The public's understanding of the environmental issues surrounding the event, the dynamics of the Gulf of Mexico's ecosystems and the impacts upon our coastal populations is lacking in depth, clarity and relevance. In order for the public to understand these issues, the public has to understand the biological processes surrounding how these components interact with both the physical environments and the plant and animal communities that inhabit them. This lack of understanding of the biological processes and the scientific procedures used to determine the impacts on those processes undermines the public's ability to effectively respond to impacts of the event. The Center will address these and other relevant issues through a series of dynamic exhibits and educational programs illustrating the public value and applicability of the University's ongoing research at the Gulf Coast Research Laboratory. The facility and its programs will increase visitors' understanding of how coastal sciences and research enhance the quality of their lives, promotes sustainability of coastal resources and how individuals can use this knowledge to make	Jackson	Yes	No	No	No	No	No	Yes	100	No		$ 18,500,000.00	########		
	Research and Education	1255	12/3/2013	Gulf Observing Aerial Program	A diverse constellation of airships, airplanes, and UAVs should be put in place to provide long endurance observation of the Gulf. The primary purpose of the aerial fleet will be to closely monitor the offshore drilling community to immediately detect any oil spills, washed ashore oil deposits, or environmental damage to sea life, coastal marshes, etc. Additional functions of the aerial observing system would include maintaining cellular communications service during and after hurricanes, helping find disabled boats, tracking contraband vessels and airplanes, and other functions/capabilities of benefit to the public. MAC proposes to assemble a team of subcontractors that will provide the aerial platforms, provide maintenance and mission support, and operate from the Stennis International Airport, in Hancock County, Mississippi. MAC is proposing a "Mississippi Centric" team that will include the Mississippi Divisions of Lockheed Martin, Stark Aerospace, Northrop Grumman, Aurora Aerospace, Nvision, Optech, and others. MAC will prepare the overall plan, have constructed one of the world's largest hangars, procure the necessary aerial platforms and ground support equipment, and operate the system for the first seven years, at which time the MDEQ will call for proposals for an operational contractor for the second seven year period.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No	Yes		Yes		############	$ -		

	Research and Education	1259	12/3/2013	Ocean Springs YMCA Expansion/Renovation Plan	The Mississippi Gulf Coast YMCA located in Ocean Springs and Tradition serves the entire Gulf Coast region with our facilities and outreach programs. The 7,000+ members between our two branches have access to fitness equipment, group exercise classes, recreational and fitness activities in the pool, child watch, social and family activities, wellness programs, and corporate membership benefits. We are able to extend our reach to promote healthy communities through our after-school programs, career engagement programs, evidence-based chronic disease prevention programs, and water safety programs. The Mississippi Gulf Coast YMCA serves over 10,000 participants annually with 5,000 of those being under the age of 18. In the last 5 years, the Mississippi Gulf Coast YMCA has provided over $500,000 in free and subsidized programs to youth, families, and seniors seeking health and community. In order to have a greater impact to families and businesses on the Gulf Coast, the Mississippi Gulf Coast YMCA is proposing the renovation of the Herbert Wilson Community Center in Gulfport into a new facility. With this additional facility, the YMCA would be able to offer a family-based fitness facility convenient to residents and businesses in the area. (This would allow us tackle the health and social needs that affect the area including diabetes, hypertension, youth obesity, and arthritis with our chronic disease prevention programs, youth engagement, and after-school and camp programs.) The facility would benefit local employees through our corporate membership benefits program to provide employee wellness through membership at the Y. We assist employees and their families in managing their total health and well being through a variety of services such as adult and childrenâ€™s land and water-based fitness classes, reduced programming fees and other family-oriented activities and special events. In the 2017 County Health Rankings, Harrison County is ranked 24th while neighboring counties, Jackson and Hancock, are ranked 8th and 6th respectively. A local YMCA provides access to exercise opportunities, chronic disease prevention programs, youth programs, and social opportunities â€“ all areas that can improve the overall social and physical health of residents thus, improving the local health ranking. A new facility will not only serve Gulfport and Harrison County but will impact the quality of life in all surrounding areas including all 7 coastal counties in our service area. Having an additional facility can increase the number of these programs by increasing awareness of the programs to individuals, schools, and employers. Gulfport is a centrally located area along the coast that also brings coastal residents who may not reside there to the area for work. These outreach programs include programs to improve physical and social health as well as youth development.	Jackson	Yes	No	No	Yes	Yes	No	Yes		No		$ -	$ -	
	Research and Education	1263	12/4/2013	Coastal Exhibits and Promote Natural Resource Stewardship and Enviromental Education	1. Promote natural Resource Stewardship and Environmental Education: MMNS proposes to promote and enhance coastal natural resource stewardship through environmental education efforts that include formal and informal education opportunities, professional development for teachers and outdoor activities for all ages. The types of projects and programs that could be implemented under this objective may include: environmental stewardship and education programs tied to gulf Coast resources that encourage and coordinate the use of existing environmental education and outreach networks and institutions; establish a more effective relationship between research and education communities; and provide meaningful hands-on ecosystem education that includes local. cultural, environmental and economic values with the belief that education will encourage action toward a healthier Gulf Coast. 2. Touch Screens for current coastal exhibits: Technology provides museums with new ways to educate, entertain, and to connect larger and more diverse audiences. In short, the old paradigm of films, tape recordings, signage, and brochures is being replaced by a new paradigm of interactive mobile phone applications and social media. State-of -the-art technology provides expanded tools for learning because it is portable, flexible, and affordable. Elo Touch screens will be installed in three coastal exhibits. The exhibits are Mississippi Sound, Brackish Marsh, and the Barrier Island Grass Beds. A media player is included wit each monitor. 3. Pop-Tank 4. 2-Cylinder Tanks 5. Custom Mobile Touch Tank: A new self contained mobile touch tank designed to mimic the habitat on Mississippi's amazing barrier islands. This mobile touch tank will present wonderful marine creatures from the Gulf of Mexico in a format representative of this facility and our state. The museum's exhibits build on children's natural curiosity about the world around them and foster a sense of wonder about nature. They are designed specifically to encourage family learning and to help young children develop science skills through play and exploration. These exhibits would represent coastal habitats and display animals specific to the coast.	n/a	Yes	No	No	No	No	No	Yes		No		$ 208,019.00	$ -	
	Research and Education	1273	12/9/2013	Adaptive Sports Program	"If they dream about it, they can do it!" Provide a means for all people to enjoy inlet waterways and adapt multi-use facility to accommodate mobility impaired citizens and wounded warriors. -New and existing multi-use facilities need to be built or added to for accommodating mobility impaired citizens and wounded warriors. To enable Disability Community options enhancements of family Orientated Recreational Activities /Educational/Stewardship programs for all ages or even physically unconditioned Citizens	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	No	Yes		Yes		$ -	$ -	
	Research and Education	1277	12/16/2013	Comprehensive assessment of the western populations of the threatened Gulf sturgeon, Acipenser oxyrinchus desotoi: long-term movements and occupancy patterns, short-term residency patterns, environmental correlates of estuarine/marine movement, and trophi	Eighty five percent of all sturgeon species on Earth are at risk of extinction, placing them on the International Union for the Conservation of Nature Red List of Threatened Species (Anonymous 2010). Overfishing and population declines due to human development (e.g., dams, low water sills) and catastrophes (i.e., Hurricane Katrina, Deepwater Horizon oil spill (DWH)) are problematic to the recovery of sturgeons, many of which do not spawn annually and can live to be 100 years old. It was evident post DWH that there was a lack of existing data regionally on a number of important ecological patterns of all taxa which would allow scientists, managers, NGOs, and NRDA to assess any potential damage to the environment from the largest accidental oil spill in history (Alford et al. 2014). This project would partner and enhance three existing acoustic array projects that are currently funded to study the western population (Pascagoula and Pearl River populations) of Gulf sturgeon, Acipenser oxyrinchus desotoi, through assessment projects from USACE (Mobile District, through 2017) and Atkins International Consulting (Gulfport Pt Authority expansion project, through 2014) and the Pascagoula River estuary project (3 yr NOAA, ending 2014). The project proposed here will focus on four themes: 1) Long-term movement and regional occupancy; 2) Short-term, high resolution movement and occupancy in estuaries; 3) Trophic ecology via stable isotope analyses (SIA); and 4) Predict Gulf sturgeon estuarine/marine movement patterns relative to water quality indicators (water temperature, salinity and dissolved oxygen), surface current speed and direction, and meteorological variables (wind and surface current speed and direction and rainfall). Conducting a comprehensive assessment of the western population will allow scientists and managers needed information on larger spatial and temporal scales over which to effectively manage and conserve this threatened species. The extensive data collected will also allow state and federal agencies and NRDA to more effectively assess future environmental impacts and damages. These data sets will also be extremely useful to any state and federal agency whose mission is to manage Threatened and Endangered species in light of probable restoration activities due to DWH via funding from RESTORE/NFWF/MSDEQ/MSDMR or other venues. The USM Fisheries Ecology and ERDC laboratories jointly have extensive experience with Gulf Sturgeon (Heise et al. 2004, Ross et al. 2009, Havrylkoff et al. 2012, Peterson et al. 2014), and its ecology and conservation and work closely with NOAA and USFWS on its recovery plans. Jointly, our team we will become the Central Point of Information and data collection on the long-	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 4,230,000.00	$ -	

	Research and Education	1278	12/16/2013	MONITORING MARINE MAMMALS IN THE MISSISSIPPI SOUND AND ADJACENT COASTAL WATERS - Research, Education and Outreach Program	Coastal marine mammals are at higher risk of being adversely impacted by the intense human activities in these regions. Lack of basic knowledge about marine mammal (MM) populations in the MS Sound and adjacent waters precludes conservation of these protected species and hinders the ability of natural resource managers to assess the impacts of human-related activities such as the Deepwater Horizon oil spill. In the Gulf of Mexicoâ€™s (GOM) estuaries and coastal waters, including the Mississippi Sound, the bottlenose dolphin (BD) is the most common marine mammal species. As a marine top-predator, BDs are prone to accumulating toxic compoundsâ€“for example by consuming contaminated preyâ€“ which are transferred to their offspring via lactation at higher concentrations. New techniques in MM research coupled with the fact that BDs are long-lived, top predators with a diverse diet (e.g., squid, shellfish, fish) allow their use as prime indicators of marine ecosystem health (Wells et al. 2004). This year, an Unusual Mortality Event (UME) of BDs on the East coast was linked to an epizootic case of morbillivirus. The largest UME declared in U.S. history is on-going in the GOM, encompassing the coastline from the Texas/Louisiana border to Franklin County, Florida. Since 2010 more than a thousand dead dolphins have been recorded in this UME. Mississippi is second only to Louisiana in the number of stranded dolphins; so far the causes of this UME have not been identified. The DWH oil spill and the UME significantly raised awareness about the inadequacy of Gulf-wide baseline knowledge for estuarine and coastal BD populations and how it limited the assessment of the DWH oil spill impacts on marine mammals (MMC 2013). This is particularly problematic for these BD stocks, including the MS Sound stock, because of their â€œstrategicâ€ status (i.e., population shows signs of decline or high human-caused mortality). The failure to meet monitoring obligations mandated by the Marine Mammal Protection Act, is in part due to the daunting number of management units defined for the conservation of BD populations (>30 stocks) in the GOM. Although an abundance estimate was produced for the MS Sound (Miller et al. 2013) BD population for 2007, the official stock estimate is still considered unknown (Waring et al. 2013) for management purposes because the study area did not fully align with the geographic delineation of the MS Sound stock. Another limitation in evaluating impacts on the MS Sound BD population, is the uncertainty about whether the current stock delineation is supported by genetic and/or behavioral data. Whether the MS Sound consists of genetically uniform groups is unknown. Knowledge about the behavior, residency and movement patterns of dolphins is essential even in the absence of genetic distinction among groups because discrete communities, arising from a tight social structure and high site-fidelity, also require monitoring under the MMPA. The primary goal of this project is to combine abundance, behavioral and genetics data to better understand BD population structure (i.e., identify geographic boundaries of the stock) in the MS Sound, which is essential to evaluate impacts of future oil	Jackson	Yes	No	No	No	No	Yes	No		No		$ 5,000,083.00	$ -		
	Research and Education	1279	12/16/2013	Mississippi Reef Fish Program: Addressing Data Needs for Regional Management of Red Snapper and Assessing Reef Fish Ecosystem Function	The red snapper, Lutjanus campechanus, is the most economically important reef fish species in the Gulf of Mexico (GOM), supporting major commercial and recreational fisheries in the five Gulf states. The stock has, however, been overfished since the 1980s, prompting the Gulf of Mexico Fishery Management Council to adopt the Reef Fish Management Plan in 1984 to institute catch limits and seasonal closures on the fishery. A subsequent rebuilding plan was approved in 2001 with the goal of recovery of the red snapper stock by 2032. Despite these efforts, a combination of increased directed effort, repeated quota overages and uncertainty about stock status has resulted in more restrictive management measures. For instance, the recreational red snapper season in the GOM has been incrementally reduced from a year-round season (365 days) prior to 1997 to only 28 days in 2012. Over the same time period, the size limit has been increased from a 13-inch to a 16-inch minimum length, and the daily bag limit has been decreased from seven to two fish per angler. As a result, the management of red snapper has become quite controversial. Compounding this management issue are impacts to red snapper stocks from the Deepwater Horizon oil spill in 2010. The release and dispersal of oil from the damaged MC252 well encompassed natural and artificial reef areas that serve as primary habitat for the species, thereby jeopardizing biological and ecological function of juveniles and adults. Further, red snapper spawn from May through September in Gulf waters, a time period overlapping the spill, and those pelagic larvae would have been subjected to oil exposure in the water column during their pre-settlement phase. While the scale of oil impacts remains undetermined, the distribution and benthic nature of red snapper made them particularly susceptible to oil exposure, and the stock was undoubtedly impacted by the Deepwater Horizon event. The State of Mississippi currently manages more than 16,000 acres of permitted offshore reef sites at 15 fish havens north and south of its barrier islands, and an additional eight sites are part of the Mississippi Rigs to Reef Program, coordinated with the Bureau of Ocean Energy Management. However, unlike Alabama and Louisiana, Mississippi currently does not utilize a standardized reef fish sampling protocol. Therefore, data on abundance, distribution and life-history characteristics of reef fish occurring at those locations that could contribute to regional management decisions are lacking. Given the uncertainty in various stock parameters for GOM red snapper and the unknown status of spill-related impacts, the purpose of this program is to obtain comprehensive ecological data on reef fish species occurring in northern GOM waters off Mississippi for use in regional stock assessment. Data on abundance, size and age composition, feeding, habitat use, population structure,	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 14,600,544.00	$ -		
	Research and Education	1280	12/16/2013	Emerging infectious diseases affect recovery of coastal marine ecosystems	The problem Salt marsh and oyster reef habitats support complex communities of plants and animals, that are the foundation for coastal ecosystem services. Among the more important services are nutrient removal, storm surge protection, and nursing commercially and recreationally important species. Unfortunately, salt marshes and oyster reefs are among the most vulnerable and declining of habitats. Climate change and natural events such as hurricanes and anthropogenic disruptions such as Deepwater Horizon oil spill are contributing to the decline of these biological communities. Epizootics of infectious diseases that emerge as a result of such natural and anthropogenic disturbances suppress or remove species from the communities and affect the health of plant and animal communities thus compromising recovery and functioning of the coastal ecosystem. The solution To remedy the disruption to salt marshes and oyster reefs from epizootics of infectious diseases following the Deepwater Horizon oil spill, we propose a multifaceted program to address important nonindigenous and indigenous pathogens, determine the roles and consequences they have for recovery and restoration of Mississippi salt marsh and oyster reef communities, and assess their threats to human health. The multidisciplinary program will elucidate the patterns and dynamics of occurrence and the infection and transmission dynamics of these emerging infectious diseases (EID). The proposed program will provide the ability to evaluate the consequences of outbreaks, assess the likelihood of emergence of coastal diseases, and provide effective management strategies for resource managers, conservationists, and public health officials.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 7,941,630.00	$ -		
	Research and Education	1281	12/16/2013	Evaluation of best management strategies for restoring carbonate-dependent habitats such as oyster reefs in estuaries and the near shore of Mississippi	Oysters and oyster habitat are among the nearshore and estuarine habitats most susceptible to the vagaries of man. The Deepwater Horizon oil spill and its aftermath including the opening of freshwater spillways to limit oil incursion devastated the oyster population over much of the Louisiana coast east of the Mississippi River eastward through Mississippi Sound. Even prior to the spill, regional investment in oyster reef revitalization and restoration was significant every year; post spill, this will only increase. Oysters are the dominant nearshore producers of carbonate upon which their habitat and a range of valuable ecosystem services depend. But, other carbonate producers influence soft-bottom habitats over much of the estuarine and nearshore region. Although time-honored practices are routinely used in reef restoration, rarely have they been rigorously evaluated. In addition, little attention is given to the vastly larger in acreage soft-bottom habitats where recent evidence suggests carbonate production may play an important role and which may be equally sensitive to environmental assaults stemming from decisions on freshwater diversion, pollutant impact, and resource management. What has not been implemented is a rigorous and encompassing evaluation of carbonate management, comprehensive of the reefal and adjacent soft-bottom region, directed both at best practices for restoration and for sustainable management. We propose a study that will identify a new standard in restoration management in which investment is made based on scientific principles and in which project design results from goal-oriented application of these principles with sustainability as an underlying requirement. The challenge is not just to revitalize an oyster population, but rather to restore to long-term sustainability the habitat (reef) itself. This challenge involves not just an improved application of present knowledge on oyster population dynamics, but also the application of the basic principles controlling the fate of carbonate in the coastal zone. We propose to extend this project onto the soft bottom where limited attention may hide substantive long-term compromises in function urgently in need of redress. The proposed effort has broad implications. Carbonate is at the nexus of the human and natural world in our estuaries and lagoons. Most commercial species are carbonate-producing organisms (e.g., shellfish) or animals dependent upon or benefiting from carbonate production. Bivalves generate a dominant habitat type (e.g., oyster reefs), yield important commercial products (e.g., oysters, clams, scallops), provide a high-value food resource to other species (e.g., crabs, fish) and are impacted by the activities of a diversity of organizing management bodies and private sector parties. Stocks are managed for commercial production. Habitats are managed for ecosystem services. Tax dollars are invested in restoration activities by federal and state agencies, and non-profit groups. Fisheries are prosecuted in a number of strategies, including transplant of seed and wild harvest of adults by tong and dredge. The expectations that exist often result in competing uses of carbonate, poorly resolved goals for its management, and undesirable outcomes of management activities. The	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 4,900,000.00	$ -		

	Research and Education	1282	12/17/2013	Developing a novel framework to evaluate structure and function of coastal wetland restoration in a spatial-temporal context using coastal preserves as reference sites	In light of damages to salt marsh resources following the DwH oil spill, it is anticipated that substantial efforts will be focused on restoring salt marsh habitats within the northern Gulf of Mexico region. In order to track the recovery of ecosystem services and function of restored salt marshes, USMâ€™s GCRL Coastal Ecosystems Group (CEG) and MSU Coastal Research and Extension Center propose to conduct integrated assessments of the functional equivalency of restored and reference salt marsh habitats at various levels of trophic and landscape organization. The proposed project will assess the functional equivalency of restored/created salt marshes compared to reference habitats found on the MS Department of Marine Resources (DMR) Coastal Preserves using an integrated approach involving: primary production, benthic secondary production, nekton abundance, marsh bird communities, and trophic linkages assessed using stable isotope analysis (SIA). These trophic levels are important in understanding production and use of salt marsh habitat as a nursery and the role restoration has in restoring these functions. Additionally, we will be estimating a number of important water and sediment quality and quantity metrics that are vital to development of a better understanding of salt marsh function. The proposed project will address issues related to conservation, preservation, and enhancement of emergent salt marsh habitat. We will develop standardized quantitative assessment metrics that can be utilized at future created salt marsh sites in coastal Mississippi and the Gulf of Mexico region. SPECIFIC ACTIVITIES: 1.Building A Geodatabase On Marsh Restoration Projects We will develop a geodatabase using GIS by compiling permits from previous coastal marsh restoration projects in Mississippi from the US Army Corps of Engineers Mobile office and the MSDMR. This database will provide information on the geographic location of restored/created marshes, when they were built, and other related information. Such a database does not currently exist and is a critical need, not only for this particular project, but also for the broader research and resource conservation management in the Gulf of Mexico region. In order to develop an efficient experimental design that covers spatial and temporal gradients required to assess salt marsh restoration success, the information collated in the geodatabase will be used to choose a range of ages (10-15 years and <5 years) of restored/created sites and these will be paired with adjacent natural reference sites (located on Coastal Preserves). The study marshes will be stratified into two broad types based on the ecological processes that drive them; namely riverine-dominated (e.g., Pascagoula or Pearl River marshes) versus marine-dominated systems (e.g., Grand Bay NERR). At each site we will be looking at the temporal/spatial functionality of marsh ecosystems from a variety of perspectives outlined below.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 8,000,000.00	$ -	
	Research and Education	1283	12/17/2013	Whale Sharks in the Gulf of Mexico: Conservation Research in the Aftermath of the Deepwater Horizon Oil Spill	Although the whale shark is the largest fish in the ocean, very little is known about its biology and ecology. Prior to the Deepwater Horizon oil spill (DWH) in 2010, we, researchers at the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory (USM GCRL), were just beginning to uncover some of the facts surrounding the occurrence of whale sharks in the northern Gulf of Mexico (GOM). The majority of reported whale shark sightings in the northern GOM are along the continental shelf edge in the waters just off of Alabama, Mississippi, and Louisiana, most notably south of Mississippi off the Mississippi River Delta (Hoffmayer et al. 2005; McKinney et al. 2012). Although typically solitary, a predictable, large aggregation of whale sharks forms annually during summer in the northern GOM (Hoffmayer et al. 2007) (Figure 1). When historic sightings data from 2003 to 2009 were overlaid by oil spill trajectory maps, it became apparent that a significant number of whale sharks likely encountered oil during DWH (Figure 2). During spill related aerial surveys conducted by the National Oceanographic and Atmospheric Administration in June of 2010, scientists photographed multiple whale sharks swimming in heavily oiled surface waters (Figure 3). Whale sharks are filter feeders, and their methodology of feeding involves skimming or vertically engulfing surface waters to filter out small plankton, including fish eggs and larvae. Therefore, swimming and feeding in oiled waters could result in oil and other spill-related toxins coating gill surfaces and affecting respiratory processes. Even if the oil and oil/corexit dispersant mixture sank, whale sharks make regular deep dives to the ocean bottom (Graham 2006, personal unpublished data) and therefore could be exposed to oil and associated pollutants at any point in the water column. Sharks in general, are negatively buoyant and, unlike other fish, sink when they die; therefore, it is difficult to observe mortality in whale sharks such as that possibly occurring due to DWH. Only inferences and comparisons of limited data can be used to determine the effect that DWH had on northern GOM whale sharks. USM GCRL has maintained an online sightings report database since 2003 to accommodate the reporting of whale shark sightings in the GOM by citizen scientists (i.e., commercial and recreational fishers, offshore petroleum industry workers, divers, etc.). To date, the database contains more than 600 reports. The number of sightings reports from 2010 to the present time (2013) has decreased by 37%. The annual summer aggregation event which typically consisted of 20 to 200 individuals (data from 2005-2010), has also decreased in size and consisted of only 12 to 24 individuals in reports from 2011-2013. It is unknown if the decreased number of sightings and overall reduced aggregation size in the northern GOM is due to a lack of actual sightings being reported, a lessened effort by the offshore community to be in areas where sightings might occur, or if fewer whale sharks were in the region as a result of mortalities or displacement due to DWH. However, given that genetic analyses have shown that whale sharks are one global population (Castro et al. 2007, Schmidt et al. 2009), and attempts at developing	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 12,775,119.00	$ -	
	Research and Education	1284	12/17/2013	K-12 Environmental Education Field Program	The CNDG proposes to develop and implement an environmental education program for K-12 students in Hancock, Harrison and Jackson counties. The program will provide high quality, curriculum-based field experiences for 15,000 students each year. Partner organizations will provide science-based hands-on field experiences so that students can learn about the critical habitats and environmental processes necessary to maintain the health of the Gulf of Mexico. CNDG is a partnership of Gulf Islands National Seashore, Gulf Coast Research Lab, Pascagoula River Audubon Center, Land Trust for the MS Coastal Plain, Grand Bay NERR, MS Gulf Coast Community College Estaurine Education Center, and the MS Sandhill Crane Refuge. The proposed environmental education field education program will provide field experiences for every student in the three coastal counties at three different grade levels. The program will include classroom activities, curriculum-based field experiences, and follow-up activities. Stewardship concepts and service opportunities will be embedded in the curriculum as well. Each student will experience and study a variety of critical habitats during their K-12 school years. These habitats include: pine savannah, maritime forest, bayou and riverine habitat, marsh, marine environments, and the barrier islands.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -	
	Research and Education	1285	12/19/2013	Hiller Park Renaissance Garden Educational/Restoration Project	The Mississippi Renaissance Garden Foundation's (MRGF)Horticulture for Humanity (H4H) movement began as an environmental recovery effort in the aftermath of Hurricane Katrina. Our mission is empowering humanity through horticulture. A 1.4 acre Hiller Park Renaissance Garden (HPRG) site on Back Bay Biloxi was leased from the city of Biloxi in 2007. The huge oak trees, nearby stream, waterfall and woodlands provide a tranquil retreat and family friendly learning destination. A future nature trail, organic gardening demonstrations, including worm composting and drip irrigation will support a community garden. HPRG has become the cornerstone of the MRGF efforts. Today, this all-volunteer undertaking utilizes this centrally located botanical and edible demonstration garden to support H4H educational goals. HPRG features labeled plants, trees, flowers and inspirational areas promoting the coastal MS landscape. It highlights plant uses such as food, environmental education, horticultural therapy and native, endangered and historical flora, as well as wildlife habitats and natural waterway uses. A small horticultural center with an office, multipurpose room, library, eco-art exhibit, gift shop, rest rooms and small catering kitchen is planned for visitors of all ages and abilities to learn wise use and conservation of our natural resources and to plant, protect and restore disaster-threatened environments. Requested funds for HPRG would be used for 1)professional assistance to design and construct a green horticultural center utilizing solar energy; 2)an irrigation system and lighting; 3)a green house with shed; 4)two outdoor pergola classrooms; 5)new garden beds and plant signage; 6)accessible walkways; and 7)security fencing. The MRGF assists six gardens maintained by local residents. HPRG would use NRDA funds to assist those gardens to accomplish H4H goals to 1)demonstrate that gardens are inspiring, functional, affordable, attainable and beneficial to the community, its residents, visitors and the economy; 2)increase healthy, sustainable lifestyles and community involvement, 3)distribute free seeds, plants, trees and other resources for their landscapes; 4)provide a base of operations (HPRG) for the MS Gulf Coast Horticulture for Humanity Movement. By addressing the injury to the physical, mental, emotional and spiritual needs of coastal people and injury to ecological, marine and wildlife caused by man-made or natural disasters, HPRG would be a model of its benefits and inspire development of other H4H gardens locally, statewide and nationally. NRDA funding would allow the HPRG and horticultural center to become a major ecological tool in the future of the MS Gulf Coast environment, its people and its nature-tourism industry.		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	

	Research and Education	1584	8/4/2011	Low-cost, 10km-range Oil Spill Sensor and Spread-predictive Sensor Deployment	(ORIGINAL ID#633) This project will establish a low-cost, remote oil spread monitoring system with the following features: - Oil Sensor Design: There is an urgent need for inexpensive, weather-robust oil spill sensors that can wirelessly report oil data. Existing oil spill sensing technologies have the following drawbacks: (1) Inaccuracy: Infrared thermal sensing and ultrasonic wave / pulse cannot accurately detect oil existence and oil thickness levels because the temperature, weather, and water current can greatly change their readings. (2) High-cost: SAR imaging and laser fluorosensors use heavy, expensive, large-size devices, and thus are not suitable to large area monitoring. (3) Power inefficiency: Although some wireless sensors can use low-cost light array sensors to detect oil thickness, their chip designs have not emphasized low-power circuit layout. More importantly, it does not have long-distance wireless transmission capability due to its use of common, low-sensitivity antenna (to be discussed in next item). In this research, we will design a low-power, low-cost, weather-robust oil spill sensor and its corresponding sensor operation control software (such as sampling rate adjustment and sleep/wake control). - 10-km oil sensing data transmission: The harsh sea conditions necessitate 10-km-transmittable oil sensors. Due to the large area monitoring of sea surface, the existing wireless sensors cannot be used here due to their short RF communication range (typically less than 100 m). The windy sea weather and harsh water current could make any two neighboring sensors separate from each other for a distance of >100 meters (even though the proposed sensors are adhesive to the oil). In this project, we will use our unique ferrite miniature antenna technology to achieve a 10-km RF communication distance and 1-km neighbor communication range. If an oil sensor cannot use its neighbors to relay the sensing data, it can directly send signals to a wireless base station. Those flo atable base stations are pre-deployed sporadically on the sea surface. A sensor can communicate with its neighbors or 10-km away base stations. - Oil spread boundary estimation: It is important to build an accurate oil spread trend estimation model based on the analysis of the data from oil spill sensors. Such a boundary estimation model can be used to guide the deployment of new sensors (ty	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 350,000.00	########	
	Research and Education	1587	7/29/2011	BP Deepwater Horizon Oil Spill Restoration Evaluation and Monitoring Program	(ORIGINAL ID#739) The Natural Resource Damage Assessment regulations make clear that final Restoration Plans should include a monitoring component so that the effectiveness of restoration measures can be evaluated. Given that BP is providing $1 billion for early restoration projects before completion of a Deepwater Horizon Restoration Plan, some of these funds should be used to establish a restoration evaluation and monitoring program. There is precedent for funding monitoring activities before an oil spill restoration plan is final. Before a restoration plan was complete, the Exxon Valdez Oil Spill Trustee Council invested funds in tracking injury and recovery at the species level, as well as research and monitoring at the ecosystem scale, to identify restoration opportunities, understand factors limiting recovery, and evaluate the effectiveness of restoration measures. An early and steady flow of information on the recovery status of specific natural resources and ecosystem services generated through this program would help managers make responsive management decisions. Without this information, less effective restoration may result, potentially requiring managers to restrict human uses of these resources. Specifically, a restoration evaluation and monitoring program is needed to: 1) evaluate the effectiveness of early restoration projects; 2) track the recovery of specific injured natural resources or lost or reduced services; and 3) report to the public on the status of injured resources, lost services, and progress toward restoration. Establishing a restoration evaluation and monitoring program for early restoration can be adapted as restoration needs change and transition into a longer-term program. On behalf of the Deepwater Horizon Oil Spill Trustee Council, NOAA, in cooperation with the Department of Interior (USFWS), is in the best position to establish and administer a Deepwater Horizon Oil Spill restoration evaluation and monitoring program. Together, NOAA and USFWS hav e the experience and existing infrastructure to coordinate monitoring across state-federal boundaries. Both agencies would serve as joint custodians of this program. This structure will facilitate the efficient gathering of data that will allow comprehensive monitoring of the full range of restoration activities. Regardless of the entity implementing monitoring, this program will require coordination among trustee agencies and possibly some new data gathering. Each year NOAA and USFWS would produce a report on the results of restoration measures, recovery of injured species, and newly discovered injuries.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	1602	4/21/2011	Integrated Approach to Wetland Damage Assessment, Vegetation Monitoring, and Restoration Tracking in the Gulf of Mexico	(ORIGINAL ID#2103) Problem Statement: Tidal wetlands bordering the Gulf of Mexico, including Federal wetlands in National Wildlife Refuge (NWR) areas, are at risk of being impacted by the oil that continues to wash ashore. A comprehensive and accurate determination of the impact over vast remote areas is not feasible with traditional survey methods. In order to identify and implement the most cost-effective solutions necessary for remediation/restoration; a unified, systematic approach using airborne remote sensing coupled with land-based restoration technologies can be implemented to 1) efficiently identify the extent of impacted wetlands, 2) effectively guide the remediation/restoration process from planning to completion, and 3) provide a calibrated measurement of the effectiveness of the remediation/restoration efforts over the long-term. Proposed Solution: SpecTIR proposes to provide comprehensive monitoring and restoration services along the Gulf coast using a proven combination of commercially available aerial remote sensing applications and innovative assessment and monitoring techniques that will promote program efficiency and cost-effectiveness. The team will use a scalable, phased approach that will identify impacted wetlands and allow for the prioritization, planning, and performance of restoration efforts. Additionally, the proposed methodology will provide a consistent and scientific means for accurate and quantitative post-restoration monitoring. The first phase of the proposed approach is to provide a baseline for restoration by collecting airborne hyperspectral imagery or, in the case of many Gulf coast NWR wetlands, assessment of the hyperspectral data already collected prior to impact from oil. Guided by initial analysis of the airborne data, groundtruthing verification and validation of the wetlands will then be performed. SpecTIR will provide the existing 2000 sq km of pre-oil, baseline hyperspectral data collected from Gulf coast NWR areas prior to th e oil entering the wetlands. The use of hyperspectral imagery for the discovery of hydrocarbons in the wetlands has been proven in the NASA funded VNIR study of an oil spill in Swanson Creek MD in 2000. The current instruments now include the SWIR portion of the spectra which brings an even higher degree of accuracy to the identification of the vegetative stress and community structure. Data and analysis will be collected into a GIS platform and be deseminated online to effectively guide restoration planning and implementation. Post restoration remote sensing monitoring will be performed to track changes in restoration success relative to the baseline data as well as coincidently identified non-impacted sites. This data will be supported with ground truthing, data verification, and sampling by qualified field teams. Once the levels of impact to the wetland vegetation has been ascertained and prioritized, the information can be used to assist in the formulation of remediation and restoration plans. Going forward, progress can be monitored with the identical methodologies and technologies used in the initial assessment.	n/a	Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	1608	10/26/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11421) Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental wellbeing of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON) - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland- Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fish varies among species. This necessitates the collaborative invo lvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.		Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -	

	Research and Education	1626	10/24/2012	A Gulf-wide multi-year research project to determine best practices for minimizing barotrauma effects on red snapper following capture and release	(ORIGINAL ID#11840) Proposed Restoration Project: The project would clarify the effects of barotrauma on red snapper and better define expected rates of discard mortality in the Gulf of Mexico. Additionally, the project will determine, through stakeholder involvement, methods and devices best fit to increase post-release survivorship of red snapper in Gulf fisheries. A detailed understanding of barotrauma and its effects on red snapper will inform efforts to help the recovery of fish populations impacted by the Deepwater Horizon (DWH) oil disaster. Link to Injury: The DWH oil disaster footprint overlapped with portions of the geographic range and spawning period of many reef fish species, including red snapper (Lutjanus campechanus). The eggs and larvae of red snapper and other finfish spawning at the time, in addition to adult fish, were exposed to petroleum hydrocarbons and chemical dispersants. Acute mortality of fish eggs and larvae and sublethal effects on adult fish could affect year class strength and population levels. Benefit and Rationale: Red snapper is an iconic and popular recreational and commercial fish species in the Gulf. In 2011, commercially landed red snapper had an ex-vessel value of $11.5 million. The recreational fishery generates millions of dollars as well. Red snapper are known to suffer from barotrauma related injuries and mortality. Barotrauma is the condition that results when a fish is brought up from depth rapidly and the change in ambient pressures can cause potentially lethal internal injuries. Most red snapper barotrauma studies have been regional , and have not encompassed the full geographical, depth and temperature ranges in which the red snapper fishery is prosecuted. Increasing the post-release survival rate of red snapper Gulfwide would reduce the impacts of fishing and allow the population to recover from the DWH injury. Description: Red snapper are susceptible to barotrauma. Barotrauma can cause internal injury (e.g., gas bladder rup ture, hemorrhaging, etc.) and positive buoyancy (i.e. floating). These injuries may not allow the fish to return to depth upon release or cause behavioral effects that can increase the risk for predation. Mortality caused by barotrauma hinders rebuilding of overfished populations of red snapper and could deter recovery from DWH impacts. Overall, fishery managers lack data on the post-release mortality of many reef fish species, including red snapper. This prevents accurate prediction of discard mortality in commercial and recreational fishery harvest estimates and stock assessments. Lack of confidence in release mortality may lead to increased management uncertainty. Accurate prediction of post-release survival is integral to setting appropriate annual catch limits of affected species in order to meet conservation goals. This project barotrauma would follow the established protocols (e.g., Jarvis and Lowe) , modified as necessary for red snapper, for both field (e.g., cages, release devices, etc.) and laboratory procedures (e.g., hyperbaric chambers and underwater acoustic tags). In general, these protocols focus on and characterize internal/external signs of barotrauma, physiological status, and short/long term post release mortality of the species. Stakeholder participation will define their needs and will assist in development of best release practices for this	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 2,000,000.00	$ -		
	Research and Education	1631	3/27/2013	10-Year enhancement for improving Gulf of Mexico Sea Turtle Stranding Network response and science capacity	(ORIGINAL ID#11947) Proposed Restoration Project: The project will augment resources available to the Sea Turtle Stranding and Salvage Network (STSSN) in the Gulf, led by NOAA, and help participating entities respond to and learn from future sea turtle strandings and thus increase the survival of rescued animals and the recovery of populations impacted the Deepwater Horizon (DWH) oil disaster. Link to Injury: Sea turtles were exposed to petroleum hydrocarbons resulting from the Deepwater Horizon oil disaster and likely to chemical dispersants used during DWH response. More than 450 visibly oiled, live sea turtles and 18 visibly oiled, dead sea turtles were recovered during DWH response from April 2010 through February 2011. Another 500+ stranded sea turtles with no visible external signs of oiling were also reported during this period. Animal autopsies revealed that the cause of death for a subset of non-visibly oiled sea turtles was consistent with drowning, but whether and how the DWH disaster contributed to strandings of non-visibly, dead sea turtles remains under investigation. Benefit and Rationale: NOAA leads the STSSN in the Gulf of Mexico, but depends on employees of federal and state agencies, universities, non-governmental organizations to run on-the-ground operations and foot response. In some cases, STSSN participating entities receive limited or inconsistent institutional support and conduct STSSN activities using their own limited time and funding. However, they are often the first to respond to sea turtle strandings, a key function in maximizing the survival of live-stranded animals, and could do more with dedicated funding to help support monitoring and response to strandings. Since April 2010, the number of sea turtle strandings in the northern Gulf has approached 2,000 animals, far exceeding the historical average. Stranded sea turtles would not be located, rescued and rehabilitated were it not for the Network and the participating organizations. Rehabilitat ed animals released back into the wild are given another opportunity to reproduce and thus contribute to the recovery of populations impacted by episodic events like the DWH disaster. Sea turtles, among other species, are the ocean?s ?canary in the coal mine,? and stranding networks, through tissue sampling or post-mortem exams, collect valuable information on the condition of animals that can not only help scientists understand the cause of illness or death but detect subtle or significant changes in ecosystem condition or function. The collection of biological information from stranded animals is critical to understanding more clearly the long-term effects of the DWH disaster and other human activities on Gulf sea turtles. Description: This project would increase capacity for sea turtle stranding programs at the state or regional level such that they are in a better position to respond to strandings, maximize survival of recovered animals, and improve the consistency and quality of pathological information collected from tissue samples or post mortems. Specifically, this project would increase capacity across Gulf STSSN programs in the field by making investments in the following operational areas: 1) developing and implementing uniform animal detection and data collection methods; 2) equipment (including vehicles); 3) supplies (including	n/a	Yes	No	No	No	No	Yes	No		No		$ 1,000,000.00	$ -		
	Research and Education	1638	12/31/2014	Capacity Buidling, Disaster Preparedness, and Sustaining Fishing Communities in the Gulf after the BP Oil Spill	(ORIGINAL ID#11987) In the wake of the interconnected cultural, socio-economic, and environmental effects of the BP Oil Spill, Gulf fishing communities are facing unprecedented short- and long- term challenges in sustaining their traditional lifeways. Our two years of ethnographic research investigating traditional cultural communities and properties in the Gulf during the BP Oil Spill and response efforts has demonstrated the intimate and vulnerable cultural relationships these communities have with their surrounding environments. This research also illustrated the need for more inclusivity of fishing community traditional ecological knowledge (TEK) in implementing innovative capacity building strategies and the development of effective conservation and sustainability plans. McGoodwin (2001) has importantly pointed out that: Over the course of its development, much of fisheries-management science, both in theory and in practice, has had a misplaced emphasis. Whereas its first concerns should have been the human beings who utilize fisheries resources, its cornerstones were instead?the conservation of important marine-biological species?[and] allocating fisheries resources and maximizing the economic benefits from them. The aftermath of the BP Oil Spill has particularly elucidated the need to emphasize and better understand the human aspects of fisheries and the roles fishing communities play in producing and promoting sustainable fishery environments. In this context and in conjunction with mandates presented by the Magnuson-Stevens Act and National Standards 8 regarding the need for fishing community consideration in fishery conservation and management decision making, this proposed project seeks to establish capacity building strategies inclusive of fishing community perspectives, values, beliefs, and TEK in: (1b) the development of community sustainability and management plans; (1c) the creation of fishery conservation networks; and (1d) the development of inter-generational and ent ry level access to and inclusion in fisheries. Methods: Participatory Learning and Action (PLA) is a method that promotes community interfacing and provides a vehicle for people to share, discuss, and expand their knowledge related to particular contexts and situations as well as to effectively prioritize, monitor, plan, and act at the community level. With each participating fishing community, the project team will organize a PLA workshop by collaborating with community members, educational institutions, and other local institutions. The workshops will be held in public facilities (where possible) at times most convenient for fisher communities and will extend over the course of three days. These workshops will provide structured as well as open interactive forums and activities where communities can present their concerns and needs, identify solutions to meet those needs, and develop community action plans and best practices related to sustainability and management programs; the creation of fishery conservation networks; and the development of intergenerational and entry level access to fisheries. The process of working in partnership with fishing communities to develop inclusive, feasible, desirable, and sustainable programs will contribute to innovative capacity building strategies that can aid the	n/a	Yes	No	No	No	No	No	No		Yes		$ 2,500.00	$ -		
	Research and Education	1639	6/17/2013	Coastal Ecosystem health: American Oystercatcher as an indicator of exposure and effects of pollutants on breeding birds on the Gulf Coast	(ORIGINAL ID#12003) The Gulf Coast of Mexico is one of the most important regions in North America for bird-watching and outdoor activities. Bird conservation along the Gulf Coast is of primary importance because it contributes to the conservation of natural resources but also because it provides economic incentives to the coastal communities by increasing tourism, including bird-watchers and nature lovers to the region. Thus, maintaining healthy bird populations along the coast is important from an economic and ecological standpoint. Fish-eating birds are at the top of the food chain and often accumulate more contaminants than other species at lower trophic levels. American oystercatchers feed on bivalves which are also consumed by humans. This study could be used to assess general ecosystem health and potential impacts of contaminants in bivalves on human health. This research project will address the impacts of environmental contaminants on aquatic birds breeding along the Gulf Coast, using the American Oystercatcher (Haematopus palliatus palliatus) as an indicator species. Coastal wetland areas, estuaries, and islands along the Gulf of Mexico coast constitute a primary nesting and feeding ground for many North American birds. Most of the species nesting on these areas are waterbirds which nest in colonies and feed on aquatic vegetation, invertebrate organisms, and fish. Exposure to environmental contaminants in these species can occur through the diet, but also directly through dermal absorption, preening, and inhalation. To our knowledge, up until now, there has not been a complete assessment of the potential impacts that environmental contaminants in the Gulf of Mexico could have on many aquatic birds, including species of special concern and in need of protection. The results of this research can also be used to determine the health of coastal areas and their potential associated impacts on other species of concern, i.e. fish, shellfish, and humans.	n/a	Yes	Yes	No	No	No	No	No		No		$ 4,800,000.00	#######		

	Research and Education	1640	6/17/2013	Conservation and evaluation of limiting factors for American Oystercatchers along the Gulf Coast	(ORIGINAL ID#12004) The American Oystercatcher (Haematopus palliatus) is the most widely distributed of the four oystercatcher species found in the Western Hemisphere with a range stretching from the northern U.S. Atlantic Coast to the tip of South America. The total population is estimated to be 43,000 with the subspecies found in the U.S. (H.p. palliatus) making up 20,000 of that total. The U.S. population is estimated to be 11,000. American Oystercatchers are restricted to the narrow band of the coastal zone throughout their range where they feed mainly on oysters and other bivalves. The threats to their survival are many and include a low overall population size, low reproductive success, and delayed breeding (3+ years of age). Productivity rates from the Atlantic Coast range from .30 to .50. Nests are subject to a whole host of mammalian, avian, and even reptilian egg and chick predators and are also subject to overwash from high tides and tropical storm events. Chicks can starve to death during high tide events when the adults are unable to find enough food. Because oystercatchers nest in the coastal zone, disturbance from human recreation is common and exacerbates other natural threats. Sea level rise is major threat to oystercatcher survival. The U.S. Shorebird Conservation Plan lists the American Oystercatcher as a species of high concern, it is a National Fish and Wildlife Foundation (NFWF) priority species, and it is included on the list of Texas Parks and Wildlife Department?s priority species. The majority of projects associated with the American Oystercatcher have been along the Atlantic seaboard with limited focus on Gulf Coast populations. In 2011, the Gulf Coast Bird Observatory embarked on a multi-year study to fill information gaps on Gulf Coast oystercatchers. We have learned much from our work so far but there are still many unknowns. We have only begun to scratch the surface of understanding of oystercatcher conservation however as there remain many unanswered qu estions. Our primary focus would be to determine how and why eggs go missing from nests and how vegetation aids in chick survival. It appears the vegetation provides chicks with critical refugia from predation but we do not have a complete picture of what type of vegetation works best. We propose to expand oystercatcher nest monitoring throughout the Gulf to determine if other Gulf oystercatchers have similar productivity and threats as Texas oystercatchers. We propose to deploy motion activated video cameras to capture egg predation events and determine without question what is causing them so that we can counteract this with appropriate conservation measures. Thirdly, we propose to conduct a detailed vegetative analysis of oystercatcher nesting islands to determine which type of vegetation provides the best chick refugia. Without this information we cannot successfully create more oystercatcher nesting habitat.	n/a	Yes	No	No	No	No	No	No		No		$ 5,800,000.00	$ -	
	Research and Education	1642	7/11/2013	Management Strategy Evaluation Model (MSE) to develop improved management strategies for fisheries and shellfisheries resources of Mississippi	(ORIGINAL ID#12026) An MSE is a complex model designed to provide a vehicle to test, through numerical simulation, a range of management options and to evaluate the influence of those options on the target species (e.g., oyster, red snapper), the fishery, and the shore-based business community. An MSE contains a series of modules: (a) a population dynamics module for the stock, (b) a metapopulation module describing recruitment dynamics, (c) a survey module, (d) a management module containing the assessment process and regulatory decision making process, (e) a module describing the fishing process including vessel characteristics and fishermen/Captain behavior, (f) an economic model describing the economics of the fishery itself, and (g) a shore-based infrastructure model describing the economics of the business community supporting the fishing enterprise. MSEs are becoming more frequently implemented when challenges from, for example, climate change or anthropogenic insult (e.g., oil spills) require re-evaluation of management approaches and regulatory reform. Examples include king mackerel, surfclam, and summer flounder. The MSE developed for surfclam has the important characteristic of being coded into a general form adaptable for many applications. This MSE will be developed into a form usable for a range of fish (e.g., red snapper) and shellfish (e.g., oyster) species. In the course of this process, important information on the economics and sociology of the fishing enterprise will be obtained that will provide an important database to guide further development of recreational fishing as part of a comprehensive approach to improving the tourism industry of coastal Mississippi.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 2,500,000.00	$ -	
	Research and Education	1643	7/11/2013	Economics and The Gulf Coastal States	(ORIGINAL ID#12028) The Objective is to have data that will capture the value of our Gulf of Mexico States seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the product harvested throughout the entire seafood supply chain, but the also calculate the economic value to regional businesses benefitting from Gulf seafood. The outcome is to have a social and economic survey that will help capture our value of the commercial seafood industry to the Nation as a whole. Presently this data does not exist. We do not have the necessary data for these type of multiplier to be include into our Economics. This will help us prove to our leaders in congress our economic and social value to the Nation.	n/a	Yes	Yes	No	No	No	No	No		No		$ 5,000,000.00	$ -	
	Research and Education	1644	7/12/2013	Monitoring ecosystem health in northern Gulf of Mexico by assessing habitat biodiversity using parasites of fishes as indicators	(ORIGINAL ID#12030) Parasites are ubiquitous and abundant in any healthy ecosystem and absent or rare in a disturbed or sick environment because they have complicated life cycles with multiple stages, each requiring different free-living hosts for completion. Consequently, parasite diversity and abundance in a habitat may be used as a proxy for overall diversity. The proposed study uses fish parasites to investigate long-term maintenance of biodiversity in the northern Gulf of Mexico (GOM). Parasite assemblages of several important t fish species will be monitored and outreach will be fostered through education and training of undergraduate and graduate students. The parasite assemblages of the gulf killifish (estuarine species), and the Atlantic croaker, (coastal species), will be assessed over a period of 5 years and data on presence and abundance of parasite species will be compared with historical data from these hosts from off Mississippi collected between 1970 and 2012. Additionally, Parasite assemblage data will be collected from coastal and GOM pelagic fishes (tunas, mackerels), reef fishes (snappers, trigger fishes) to identify baselines and trends. Thirdly, a college-level course (Parasites as Indicators of the Environment) will be developed for USM, Department of Coastal Sciences (Summer Field Program) which will train students and produce data for the presently proposed project. Establishment of the course would enable the continued collection and expansion of established datasets indefinitely beyond the 5 year project deadline.	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,225,000.00	$ -	
	Research and Education	1653	8/7/2013	Enhancement of IMMS Public Outreach and Education Programs	(ORIGINAL ID#12066) The events surrounding the Deepwater Horizon oil spill stressed the need for having a well-informed citizenry regarding marine conservation and restoration. A key to this goal is to support education and outreach programs whose mission is to teach the public about the great natural resources of the Gulf of Mexico. The Institute for Marine Mammal Studies ? Center for Marine Education and Research (IMMS-CMER) is a premier marine education and conservation facility that offers a variety of educational programs designed to meet the academic and outreach needs of multiple audiences on educational topics including marine mammals, sea turtles, fish biology, marine invertebrates, threatened/endangered species, invasive species, point and non-point pollution, marine habitats, and water quality. Our current educational programs consist of: - Student camps that provide hands-on exploration of coastal wetlands, beach and barrier islands, birding, and fisheries, - Academic field-trips designed to familiarize students with the plants, animals, habitats, and processes of marine and aquatic environments tailored to the visiting age group, - Teacher Workshops provide teachers with opportunities to expand their knowledge of coastal issues and provide a venue for teachers to earn continuing education units (CEUs) or college credit, and - College field courses that expose students to applied marine science and marine mammal and sea turtle rescue and rehabilitation. IMMS seeks to continue and enhance current educational and outreach programs while actively engaging in development of new programs to educate the public. These include: - Ecotours to provide unique, hands-on field experiences - Technology labs to introduce students to modern research techniques - Exhibit enhancements for our public Discovery Room facility - Outreach capabilities for community festivals and events Investing in public education regarding marine conservation issues will contribute to ultimate goal of a restored and healthy Gulf of Mexico for generations to come. IMMS is committed to fostering a sense of appreciation and stewardship for the great coastal and marine resources in Mississippi and the Gulf of Mexico for those young and young at heart.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	No		No		$ 3,000,000.00	$ -	
	Research and Education	1740	2/17/2014	Camp Wilkes Environmental Enhancement	Camp Wilkes, Inc., a 501c non-profit, is seeking funding for restoration and enhancement of its 89 acre waterfront site on the Back Bay of Biloxi for the dual purpose of conserving its natural resources and expanding tourism attractions on the Gulf Coast. Development of project plans is underway.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	

	Research and Education	1741	6/1/2014	MS Gulf Coast Environmental Educational Collaborative	Coast Ecosystem Education and Training Collaborative (CEETC) The Oil Spill has further exacerbated the gap between disadvantaged minorities (African-Americans, Hispanic, Vietnamese and low income whites) and available education funding, job loss and access to marine vessels for education. The Mississippi Gulf Coast includes approximately 70 miles of coastline plus numerous bays, estuaries and navigable rivers. Not only does this ecosystem support a diversity of marine life and habitats, but our coastal waters support an economy that generates nearly $146 million each year. Unfortunately, although the Coastal Counties (Hancock, Harrison, and Jackson) have an abundance of diverse ecosystems, recreational opportunities, and marine life education minority children rarely get the chance to experience any of this richness. It is the goal of CEETC to connect under-served children from Hancock, Harrison, and Jackson counties (to include African Americans, Hispanics and Vietnamese but not limited to) with their habitat through our hands-on and feet-wet adventures. Connecting our youth to the outdoors will offer a learning experience that has been previously accessible only to the more affluent, as well as open doors to career opportunities in the fishing industry, marine biology, conservation, and eco-science in general. The CEETC project will be a multi-year (4 years) year-round and ongoing ecosystem,environmental, educational and recreational project designed to educate coastal youth in the area of marine life studies, in addition to the aforementioned. All of the environmental education programs will be in partnership with the eight (8) school districts in the three (3) county area along the Mississippi Gulf Coast and each school district's science/marine biology courses. All of the educational programs will also be in partnership with the Mississippi Gulf Coast Community College Marine Biology Dept. The marine life studies program will through some classroom, water safety classes (swimming and water survival), marine field trips, and practical experience provide instruction on the general ecology, habitats, vegetation types, wildlife and conservation issues of Coastal Mississippi. Other activities include, but are not limited to: the environmental and health hazards of marine debris, water and shore cleanups in conjunction with state environmental agencies to educate and certify young adults to work in environmental hazardous spills, study and observation of marine wildlife, laboratory investigations, marine arts and crafts, fishing, fish identifications, insects and vegetation in our ecosystem, and an introduction to the micro-organisms in our water. This education will include aquatic life, tributaries, and basins connected to the Gulf.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes	No		Yes		$ 750,000.00	$ -		
	Research and Education	1766	8/25/2014	Deepwater Horizon Oil Spill Impacts: A Pilot Educational Program	The Marine Education Center (MEC) proposes to implement a pilot education program to inform local students about the effects of the 2010 Deepwater Horizon oil spill event. This program would take place during the academic year, and provide field trips for every 5th grade student in Jackson County (â‰ˆ 1,500) to the Gulf Coast Research Lab. Activities will include a 90-minute boat tour of the Davis Bayou area aboard the Miss Peetsy B, which was donated to the MEC by Jimmy Buffet and his sisters, Lucy Buffett and Laurie Buffett-McGuane, in honor of their mother who was passionate about education. The vessel's name comes from Mrs. Buffet's nickname - Peetsy B. The Buffet family, originally from Pascagoula, donated the vessel to help educate students about their coastal environment, and ultimately create a more informed citizenry to protect and maintain our local marine habitats. During the Davis Bayou tour, students will learn basic salt marsh and estuarine ecology, and the connection of salt marshes and estuaries to other ocean habitats, the importance of the marsh ecosystem, and the potential impacts to the area from oil exposure. After the tour, students will engage in a series of classroom activities and demonstrations regarding oil spill impacts and how these might differ in shallow and deep water habitats. Participating teachers will be provided with lesson plans to implement in their classrooms in support of this program, and all activities and curriculum will be tied to the Mississippi Science Framework, National Next Generation Science Standards, and the Common Core Curriculum.	Jackson	Yes	No	No	No	No	No	No		No		$ 102,800.00	$ -	Curriculum development	
	Research and Education	1783	3/21/2014	Riverwalk Park and Educational Boardwalk Trail	This project will construct a Riverwalk Park and Educational Boardwalk Trail. The park will be located across the street from the Jackson County Ski area. It will consist of a park with pavilion and restrooms, and a boardwalk pier parallel to MS 613 that will allow for fish feeding and highlight native species and cultural history of Beardslee Lake. This project will promote tourism to Moss Point and the County, generate local ecosystem education outreach, provide additional recreation opportunities along the greenway, and stimulate environmental cultural stewardship, tying the unique cultural aspect of the community with the ecosystem along Beardslee Lake. The goal of the park will be to create an inviting and functional waterfront environment in Moss Point that restores the quality of life for residents and continues improving public access to natural resources.	Jackson	Yes	No	No	Yes	No	No	Yes		Yes		$ -	$ -		
	Research and Education	1789	3/21/2014	Marine Education Center Outdoor Learning Area	Plans are in place to construct a new 28,000 sq. ft. Marine Education Center at the Gulf Coast Research Lab's Cedar Point Teaching Site. The new MEC facility is an $11.5 million dollar FEMA funded project with anticipated construction beginning in 2014. The new facility will be a center for public education and outreach in the coastal sciences and will be comprised of classrooms, laboratories, and educational exhibits. The MEC proposes to build two outdoor classrooms, an observation tower, marsh walk-out sampling stations, and ADA accessible trails as part of this project. The MEC specializes in field-based learning experiences that support science curricula and the Cedar Point Teaching Site provides extensive opportunities for outdoor environmental education and recreation. With the development of this outdoor learning infrastructure, visitors and students will be able to explore a range of coastal environments and engage in hands-on, feet-wet field based learning experiences. These open-air facilities will allow students to study coastal environments such as the bayou, the marsh, the Mississippi Sound, bay-heads and magnolia-live oak forests while protecting the resources from overuse. The low profile marsh walk-out sampling stations will be constructed over the marsh with open mesh frames and close to the Mean High Tide level which will reduce impacts to the tidal flow and minimize impacts to vegetation. The marsh walk-out sampling stations will allow students to monitor flora and fauna in the fringing marsh areas of the MEC site. These sampling activities are covered under the Saltwater Scientific Collection Permit that is issued to GCRL through the Mississippi Department of Marine Resources. The trails that connect these structures will make them accessible to students and visitors of most abilities. All trails, outdoor classrooms, and the proposed observation tower will be built to ADA standards and will be accessible to most students and visitors. These structures will be used by up to 10,000 students and visitors each year.	Jackson	Yes	No	No	Yes	No	No	Yes	80	No		$ 1,033,850.00	$ -		
	Research and Education	1793	3/25/2014	Educational Exhibits at the Proposed Marine Education Center	Plans are in place to construct a new 28,000 sq. ft. MEC facility at GCRL"s Cedar Point Teaching Site. The new MEC facility is an $11.5 million dollar FEMA funded project with anticipated construction beginning in 2015. In this new facility is designated exhibit space that will be open to the public at no cost and will include a series of high quality, interactive educational exhibits. The three exhibits will focus on The Science of the Spill, Coastal Hazards/Community Resilience and Blue Water Science. The Science of the Spill exhibit will be an extension of the work that GCRL did as part of a Rapid Response Grant through the National Science Foundation in 2010 â€" 2011 and continued through an EPA grant in 2013. The exhibit will address the role of science during an emergency. It will use published research conducted by GCRL scientists and others to answer the questions set out by the Gulf of Mexico Research Initiative: 1.) What happened to the oil and the dispersants? 2.) What were the effects on the environment? 3.) What methods are being used for recovery and how are they working? 4.) What are the impacts on human health? The Coastal Hazards/Community Resilience exhibit will describe the natural disasters (e.g., hurricanes) and ecosystem processes (e.g., sea level rise) that can affect communities in the coastal region and highlight strategies that communities and individuals can adopt to be more resilient. The Blue Water Science exhibit will highlight the research of GCRL researchers in offshore environments that most people never experience. Ecosystem processes and species that may be highlighted include the loop current, sargassum, and large pelagic species such as whale sharks. Visitors to the MEC, which include students and citizens from the region, will gain a better understanding of the impacts on the Gulf of Mexico from the Deepwater Horizon oil spill and the importance of long term monitoring and research to help ensure a healthy Gulf.	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 2,782,000.00	$ -		

	Research and Education	1799	4/4/2014	Multifaceted evaluation of living shorelines in the Mississippi Sound	Living Shorelines (LS) are primarily designed to control erosion using non-traditional materials that enhance shoreline stability while preserving natural coastal processes. Although these approaches for shoreline protection have been successful for increasing shoreline stability and improving localized biotic integrity in some areas, very few projects are monitored to evaluate long-term success. Given the novelty of LS, each project represents a unique opportunity to gain valuable information that can be used to inform future project design within an adaptive management framework. We propose a long-term, multifaceted monitoring approach for several proposed and newly constructed LS along the Mississippi coast that includes measuring physical and biological variables to determine if LS are improving shoreline stability and increasing biotic integrity compared to unaltered control sites. The first objective is to quantify the effects of LS on shoreline stability, soil properties, water quality, and biotic communities compared to unaltered control sites that are likely candidates for shoreline protection, but are not receiving a treatment. Physical parameters include shoreline erosion, sediment quality, and water quality. Biological parameters include infaunal, demersal, and nektonic communities, and diamondback terrapin nesting and movement. The second objective in this study is to develop cost-benefit analyses for each monitored living shoreline by valuing project costs and net benefits for each site using functional values of sediment storage, nutrient retention, shoreline habitat, land values, and project costs. Comparing physical, biological, and economic benefits of LS with control sites will help to determine which LS options are cost-effective. A more complete understanding of the functions provided by alternative shoreline protection measures is sorely needed in Mississippi and in the larger southeastern U.S. where very little research has been done. By gauging responses of a large suite of variables, we believe that the proposed research will illuminate the strengths and weaknesses of several different approaches for shoreline protection, which will ultimately improve future decision making in this region. The LS approach will continue to be a viable option to control erosion by natural resource managers; therefore, this research will help decision makers fund or permit appropriate cost-effective LS projects in the Gulf of Mexico.	Hancock	Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -		
	Research and Education	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kempâ€™s Ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kempâ€™s ridley sea turtles are a Critically Endangered species that relies heavily on the north-central Gulf of Mexico for developmental habitat for foraging juveniles and sub-adults. Since 2010, more than 800 sea turtles, mostly immature Kempâ€™s ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kempâ€™s ridleys have been incidentally hooked at local fishing piers in Mississippi. A variety of factors are likely responsible for increased strandings including degradation of natural oyster reefs and subsequent declines in abundance of essential prey items of the species that rely on these habitats. Declared failures of both oyster and blue crab fisheries in recent years support this hypothesis and illuminate the importance of a healthy ecosystem for recovering populations of Kempâ€™s ridleys. The purpose of this project is to facilitate the recovery of Kempâ€™s ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kempâ€™s ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kempâ€™s ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kempâ€™s ridleys and their prey, will promote the restoration and recovery of Kempâ€™s ridley prey species, and could potentially promote development of new economic opportunities associated with stock enhancement. Recent research led by IMMS has revealed that the Mississippi Sound is a vital developmental habitat for Kempâ€™s ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kempâ€™s ridleys has indicated the importance of these areas for developing sea turtles. To promote the restoration and recovery of this endangered species, continued monitoring of its important habitats and prey and enhancement of local stocks of prey items is essential. Ultimately, this work is will play an important role in both ecosystem and economic restoration of the north-central Gulf of Mexico.	Hancock, Jackson, Harrison	Yes	Yes	No	No	Yes	Yes	Yes	60	No		$ 18,000,000.00	$ -		
	Research and Education	1810	4/14/2014	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the north central Gulf of Mexico	In the aftermath of BP Deepwater Horizon Oil Spill, larger numbers of bottlenose dolphins and sea turtles have stranded in the northern Gulf of Mexico, and many of these strandings have occurred along the coast of Mississippi. The Institute for Marine Mammal Studies (IMMS) has played a central role in the stranding response and rehabilitation efforts during this time. The proposed project will promote the restoration and recovery of dolphin and sea turtle populations in Mississippi waters through a systematic approach of 1) responding to dolphin and sea turtle strandings; 2) rehabilitating sick and injured dolphins and sea turtles; and 3) monitoring the recovery of wild dolphin and sea turtle populations. Representing apex predators, dolphins and sea turtles are ideal bioindicators of ecosystem health. This project, led by Mississippi State University (MSU), will facilitate understanding of how these species have endured numerous environmental stressors and foster their future survival, which is imperative for the restoration and recovery of the northern Gulf of Mexico. This project adheres to the selection criteria set forth by the National Fish and Wildlife Foundation (NFWF), to remedy harm and eliminate or reduce the risk of future harm to Gulf Coast natural resources that were impacted by the Deepwater Horizon oil spill. This project conforms to NFWF criteria as follows: -The Mississippi Sound and adjacent waters were directly impacted by the oil spill and response activities -Marine mammals and sea turtles experienced direct and indirect injury resulting from the oil spill and response activities in the north-central Gulf of Mexico -Project includes science-based methodologies that produce measurable and meaningful conservation outcomes to marine mammals, sea turtles, and their habitats -This project will help mitigate damages from the oil spill, aid in the restoration and recovery of these species, and enhance management of marine resources by state and federal agencies The Mississippi Sound and adjacent waters of the north central Gulf of Mexico (nGOM) provides essential habitat for several endangered and threatened species including Kemp's ridley	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 16,520,879.00	$ -		
	Research and Education	1823	5/13/2014	Center for Marine Ecosystem Health	The Center for Marine Ecosystem Health will provide scientific information and technology transfer to resolve ecosystem health issues associated with increased pressures on the coastal environment from oil spills, land runoff, introduction of animal pathogens with trade, and increased population growth. The center will conduct interdisciplinary research to overcome issues related to human health, ecosystem health, and the animal health constraints to the development of marine aquaculture. The goals of the Center are: (1) To protect seafood consumers and living marine resources from epizootics of indigenous and nonindigenous agents of disease that may be introduced from aquaculture, from ship ballast water, or from imported raw seafood products. To gain an understanding of the biology and epidemiology of pathogens important to marine resources. To provide information on identification and control of natural epidemics of mortalities of marine organisms. (2) To accelerate the development of marine aquaculture through an emphasis on biosecurity, stock health, and environmental stewardship. To gain an understanding of the influence of pathogens important in marine aquaculture. To provide expertise on quarantine and establishment of Specific Pathogen Free-based marine aquaculture. To provide information and advice on disease diagnosis and control in support of marine aquaculture. (3) To evaluate and enhance the environmental health of the Gulf of Mexico through a better understanding of marine toxins, including oil related products and their mechanisms of action, and to develop interventions and remediation strategies. To provide expertise, information, and advice on environmental contaminants to industry and governmental agencies. The project will build state-of-the-art facilities and assemble a team of outstanding scientists and technical personnel from the academic, government, and private sectors to focus on the study of diseases of marine organisms, diseases of humans conveyed by the marine environment, and marine environmental health, including seafood contamination. The center will provide expertise to evaluate diseases in wild aquatic organisms as monitors of the health of ecosystems. Furthermore, in order to make informed corporate and regulatory decisions, a real need exists by industry and governmental agencies for data on potentially toxic environmental contaminants. Location (City, County): GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): __$6 million (3 yrs)_____ Annual Operation & Maintenance Cost (# years): __$2 million (7 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Implementation of this project will address the key RESTORE priority areas of restoration, mitigation of insults caused by toxins and pathogens, and economic development. The project will build capacity for federal and private funding to sustain the Center after project completion.	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 6.00	$ -		

	Research and Education	1827	5/13/2014	Analysis of the productivity dynamics and ecosystem health of the Gulf of Mexico using the sentinel species Gulf menhaden	. The Gulf of Mexico (GOM) is a dynamic and productive region that provides a variety of ecosystem services. However, it is subject to a range of chronic and episodic natural and anthropogenic impacts. In order to understand what ecosystem targets managers should strive to attain, an understanding of the long-term ecosystem conditions is necessary. In this proposal, an informative indicator of ecosystem health will be developed using Gulf menhaden (Brevoortia patronus) as a sentinel species. NOAA Fisheries, in cooperation with the commercial fishing industry, maintains a biological archive of Gulf menhaden scales (1964 to 2012, approximately 4,600 to 16,800 for each year). We will analyze these scales by subsampling the scales and determining their temporally and spatially specific stable isotopic signatures of carbon 13, nitrogen 15, and oxygen 18. Using this information we will reconstruct the historic productivity and temperature cycles in the GOM. Because of the applicability of this information to management, academicians, industry, and conservation representatives, the deliverables of this work are expected to have a broad, immediate, and profound impact. One application of the ecosystem health indicator will be to understand the external drivers of fishery dynamics. For example, both the blue crab stock and the gulf menhaden stock exhibit a reduction in productivity in 1995. It is likely that these departures indicate a â€œregimeâ€shift in the environment. The proposed analysis would be invaluable because the relatively poor fits of many assessment models remain a substantial hurdle in the management process, such analysis will be improved with ecosystem information. Location (City, County):Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $487,286 per year (6 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple resource foci by expanding fishery monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and furthering the understanding of community and ecosystem ecology. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers. Improvements in fisheries management will lead to improved assessments and lessen the need for precautionary management that limits the economic value of fisheries.	Jackson	Yes	Yes	No	No	No	No	No		No		$ 2,923,716.00	$ -	
	Research and Education	1829	5/13/2014	Cumulative Imacts Assessment Tool for Ecosystem Based Management	As multiple restoration projects are implemented in the northern Gulf of Mexico, there is a need to understand and quantify impacts on the ecosystem. While positive impacts are most likely, there is risk that interactions across projects may have â€œunintended consequencesâ€ For example, changes in water quality such as salinity and sediment load may adversely impact desired habitat conditions. Consequently, a method that informs ecosystem based management is needed. This proposal is to develop and deploy a placed-based cumulative impacts assessment tool (CIAT) for scientific assessments of synergistic interactions of multiple restoration projects. The CIAT will be built using existing technologies and data for conducting scenario analyses and simulations. The CIAT will allow managers to evaluate impacts of multiple projects on the overall quality of the ecosystem in the northern Gulf of Mexico and provide science based assessments for adaptive management as restoration projects develop over time. Additionally, enhanced assessment techniques will be used to evaluate the stability and sustainability of individual projects during construction and post construction. The project will be a collaborative effort with engineers and scientists from Mississippi State University (MSU) and the University of Southern Mississippi (USM) and will be coordinated with state and Federal agencies conducting restoration in the northern Gulf of Mexico. Emphasis will be placed on projects in the Mississippi Sound and Lower Mississippi River. This proposal includes two major tasks 1) development and deployment of a cumulative impacts assessment tool (CIAT) that includes project information and simulation capabilities for assisting management and 2) enhanced observations using a variety of platforms (satellite, aerial, water borne (surface and subsurface), and field measurements) to assess project stability and sustainability. This combined approach will allow for adaptive management, incorporation and interaction with other assessments (e.g., MsCIP), and provides a mechanism for public interactions. Recent and ongoing studies conducted by the Northern Gulf Institute (NGI) (www.NorthernGulfInstitute.org) provide a wealth of information on physical, chemical, and biological processes in the northern Gulf of Mexico. For example, NGI has established hydrodynamic models with ecological modeling capabilities for Bay St. Louis, MS and the Mississippi Sound (Camacho and Martin, 2012, McAnally et al., 2012). These models provide capabilities for Integrated Ecosystem Assessments (IEA) and are part of the ongoing NOAA IEA program. They are also compatible with hydrodynamic models such as ADCIRC, FVCOM, and CH3D which have been applied in the region. This approach is also directly applicable to the Gulf of Mexico Alliance, Ecosystem Integration and Assessment Priority Issues Team. Additionally, NGI has developed and utilized Sulis, a decision support system,	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 7,500,000.00	$ -	
	Research and Education	1830	5/13/2014	Crafting a mechanistic functional indicator of hypoxia and ocean warming	The proposed project will contribute to a functional explanation of responses by benthic organisms to changing and interacting gradients of dissolved oxygen and temperature, stressors associated with two primary coastal health concerns, namely hypoxia and climate change. Furthermore, this research will take the next logical step toward producing a functional indicator of hypoxia for coastal estuarine ecosystems. The research questions are founded on the premise that macrobenthic population responses to organic enrichment and hypoxia should entail a number of mechanistic links to individual organisms in terms of their bioenergetic capacity to respire, consume, and allocate energy. Experiments will be performed using various body sizes of several prevalent benthic polychaete taxa. In addition to acute mortality, chronic effects in terms of autecological processes, including aerobic and anaerobic respiration, tropho-energetic parameters, as well as growth and degrowth rates will be quantified at various combined levels of dissolved oxygen (DO) and temperature. Information gleaned from lab experiments will be synthesized within the context of an incipient hypoxia mass balance model (HMBM) to examine how autecological processes would interact to elicit temporal changes in biomass-size distributions under alternative scenarios of DO and temperature. Model simulations will be compared to benthic samples in conjunction with continuous water quality data. In addition, incorporating parameter estimates within the HMBM will help to assess the feasibility and applicability of developing a functional indicator that can be mechanistically explained through autecological processes. An ultimate goal is to craft a model which can apprehend how effects of hypoxia and warming affect trophic transfer potential to important fisheries species, such as brown shrimp. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 (4 years) (actual budget depends on the amount of salt marsh restoration activity involved) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project addresses multiple RESTORE and GoCoast key and priority focal areas, and will compliment anticipated substantial investments of RESTORE funds into understanding ecosystem consequences of hypoxia. The proposed project will interface directly with resource management agencies and NGOâ€™s in the region in order to disseminate the findings from this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	

	Research and Education	1831	5/13/2014	Artificial reefs and hypoxia: examining linkages and effects on reef fish populations	Artificial reefs are commonly built to create fish habitat in hopes of increasing fish stocks. The Mississippi DMR has created many shallow reefs within Mississippi Sound using concrete rubble and oyster shell. Further offshore, a dozen offshore reef sites (fish havens) ranging in size from 8 to 10,000 acres have been established. Ongoing research on nearshore artificial reefs in Mississippi Sound show that the biofilm, a diverse community of microbes and invertebrates, that colonizes these surfaces are net heterotrophic and have a high biological oxygen demand, yet hypoxia rarely develops on these shallow reefs due to shallow waters and high water column mixing rates. The offshore reefs are deeper (50-100 ft) and located in a region where the water column is stratified during the summer. This stratification combined with riverine nutrient inputs leads to bottom water hypoxia. Biofilm found on large offshore reefs will increase the biological oxygen demand and may contribute to hypoxia. We propose to examine the oxygen and nutrient dynamics of 5 offshore artificial reefs and at 5 non-reef sites over a 4 year period to determine if artificial reef sites are more susceptible to hypoxia relative to the non-reef sites. Stable isotopes of the major nitrogen species will be examined to determine the sources of dissolved nitrogen. Fish populations at each site will also be surveyed by underwater video collected by members of the Mississippi Gulf Fishing Banks (who frequently dive these sites) to determine effects on reef holding capacity. Bottom hypoxia associated with artificial reefs could deter the recruitment of juvenile fishes, which seek out reef habitats after settling from the plankton. Fish early life stages will be surveyed to examine evidence for fisheries production (eggs), as well as hypoxia-mediated relationships between larval supply (pelagic larvae) and settled recruits (juveniles). Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1.419,000 (4 years - $355K/year) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research fulfills many RESTORE/GoCoast priorities: expanding fisheries monitoring for Mississippi offshore waters, building local expertise, creating partnerships, and implementing ecosystem-based management. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Three graduate students will be trained on highly technical methods used for this project. In	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,419,000.00	$ -		
	Research and Education	1832	5/13/2014	A management strategy evaluation for assessing coastal habitats and ecosystem services in the northern Gulf of Mexico	The coastal continental and island habitats in the northern Gulf of Mexico (GOM) are subject to a range of chronic and episodic impacts. In order to maintain the health of these ecologically critical habitats, while balancing the needs of stakeholders, a management framework that considers the complex social, economic, and biological tradeoffs when considering various management options is necessary. We will conduct â€œrapid assessmentsâ€ of habitats in the northern GOM and quantify the biological, chemical, geological, and cultural status of these areas. The Coastal Ecology Group at the Gulf Coast Research Lab is uniquely positioned, because of their broad expertise, to perform this work. This multi-disciplinary investigation of the northern GOM habitats will be combined with published information to provide a comprehensive inventory of northern GOM ecosystem structure and function. Given this information, we will use management strategy evaluation (MSE) to provide decision makers a framework to understand how the imposition of alternative management strategies will alter the function of coastal ecosystems. The MSE framework will provide decision-makers and stakeholders with the tools necessary for long-term planning and help ensure healthy and sustainable coastal ecosystems. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $467,375 per year (8 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple foci including: Seafood (eco-restoration, habitat research), Research and Education (research capacity, partnership building, ecosystem-based management, critical habitat monitoring). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers for long-term planning. â€ƒ	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,739,000.00	$ -		
	Research and Education	1834	5/14/2014	Mississippi Fisheries Oceanography, Monitoring and Assessment Program (MFOMAP)	Variability in the recruitment of marine fishes to adult populations is largely related to the variability encountered in vital rates (e.g., growth, mortality) during the egg and larval stages. An understanding of this natural variability (environmental "background noise") will allow us to assess and predict the impacts of large perturbations (e.g., oil spills, tropical storms and hurricanes, and climate variability) on the marine fisheries resources of Mississippi. The overall goal of the Mississippi Fisheries Oceanography, Monitoring and Assessment Program (MFOMAP) is to collect long-term baseline data to understand the nature of nearshore and coastal environmental factors as they relate to fisheries production. The core component of this program will be monthly surveys to target the early life stages of marine fishes (eggs, larvae and juveniles) and decapods (megalopae, zoea), along with their zooplankton predators (e.g., gelatinous zooplankton) and prey (e.g., copepods). In addition, the physical environment will be characterized through field-based sampling (e.g., salinity, temperature, nutrients, dissolved oxygen). This ecosystem-based, "physics-to-fish" approach will utilize advanced sampling techniques, including a multinet plankton-environmental sampler (e.g., MOCNESS or BIONESS) and an In Situ Ichthyoplankton Imaging System (ISIIS), to characterize the abundances, distributions, and seasonality of planktonic assemblages. Specific objectives for the MFOMAP will be to: 1) provide data and support for DMR science and management goals; 2) provide guidance for fisheries recovery and restoration efforts related to Deepwater Horizon; 3) establish a regional center of expertise for fisheries oceanography and plankton research; 4) provide research opportunities and training for our next generation of marine scientists and taxonomists; and 5) enhance awareness through continued community outreach and education. This program will provide a spatial and temporal expansion to the existing NMFS long-term plankton program (SEAMAP) that samples federal waters. The SEAMAP plankton database is the primary data source for the federal NRDA, and therefore a state complement would benefit Mississippi-specific assessments in the future. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $645,750 total (10 years) Annual Operation & Maintenance Cost (# years): $1,410,000/year (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? : The project fulfills multiple RESTORE priorities by expanding fisheries monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and conserving commercial and recreational species (along with the jobs and industries they support). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project is labor intensive, highly technical, and therefore provides an excellent opportunity	Jackson	Yes	Yes	No	No	No	Yes	Yes	30	No	monitoring	$ 2,055,750.00	$ -		

	Research and Education	1835	5/14/2014	Ecological assessments and development of fisheries-independent data and environmental indices for offshore pelagic habitats	Oceanic ecosystems are open systems where biological components are connected through complex interactions of life history strategies and physical processes. The distribution of floating Sargassum in the northern Gulf of Mexico and the spatial/temporal variability associated with the Loop Current are prime examples of these processes. Floating Sargassum represents an oasis of biogenic habitat in an otherwise featureless (habitat-deprived) ocean, and thus serves as critical habitat for resident and transient fishes, invertebrates, and sea turtles. Larval and juvenile stages of recreationally and commercially important species (e.g., tripletail, grey triggerfish, bluefin tuna, mahi mahi, wahoo, billfishes) use Sargassum habitats as nursery areas, as do the early life stages of important forage fish species (e.g., flyingfishes, halfbeaks) that serve as prey for many sportfishes. Similarly, frontal boundaries associated with the Loop Current and its associated eddies and filaments are spawning "hot spots" for tunas, billfishes and other large pelagics. The overall goal of this study is to examine the ecology and nursery habitat function of pelagic habitats, with an emphasis on Sargassum aggregations and Loop Current-derived features. Specific objectives of the project are to: 1) develop collaborations with colleagues at USM/DMS to ground-truth remote sensing observations and characterize the local and gulfwide extent/variability of Sargassum and Loop Current features; 2) characterize seasonal and interannual variability in larval and juvenile fish assemblages associated with these features; 3) characterize variability in food web dynamics and "nursery" functions associated with these features; 4) develop regional (Mississippi) and Gulf-wide predictive models of Sargassum distribution and biomass based on shipboard and remote sensing observations; and 5) develop larval and juvenile fish indices (for inclusion in stock assessments) "weighted" by information gained on fish associations with Sargassum and Loop Current features. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,124,000/year (5 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple RESTORE and GoCoast priorities by expanding fisheries monitoring for Mississippi offshore waters, building local expertise, creating partnerships, implementing ecosystem-based management, developing novel habitat mapping tools, promoting research and education initiatives, and conserving commercial and recreational species (along with the jobs and businesses in Mississippi these resources support). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The proposed work is labor intensive, highly technical, and therefore provides an excellent	Jackson	Yes	No	No	No	No	Yes	No		No	monitoring	$ 5,620,000.00	$ -		
	Research and Education	1836	5/14/2014	Salt Marsh Restoration - Functional Equivalency Assessments	. In light of damages to salt marsh resources following the DwH oil spill, it is anticipated that substantial efforts will soon be focused on restoring salt marsh habitats within the northern Gulf of Mexico region. In order to track the recovery of ecosystem services and function of restored salt marshes, and to properly assign credits in terms of ecosystem and economic value, Pİâ€™s associated with the USM GCRL Coastal Ecosystems Group (CEG) and Center for Fisheries Research and Development (CFRD) propose to conduct follow-up integrated assessments of the functional equivalency of newly restored salt marsh habitats. Unfortunately, once saltmarshes have been created there is very little known on how they function, especially at various levels of organization. The proposed project addresses the assessment of created salt marshes in terms of marsh function using an integrated approach involving: primary production, benthic secondary production, nekton abundance, and biogeochemical perspectives. In a previous study funded by Tidelands conducted by the PIs in 2005, various quantitative assessment metrics were developed. In this proposed study we will compare newly created marshes with reference sites over a time trajectory in order to establish at what ages the created marshes function equivalently to a natural marsh. Ecosystem compartments will include saltmarsh vegetation, infaunal and epifaunal invertebrates, nekton, and larger transient fishes, as well as nutrient and organic matter concentrations in the pore water and in the particulate phase, and stable isotope signatures of selected organisms at various trophic levels to assess the progression of change in the trophic structure of restored marshes relative to that representing natural reference conditions. Focal sampling for most of the metrics will be encompassed by replicate throw trap samples, from within which various other samples will be taken. Location (City, County): Ocean Springs, Jackson Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,000,000/year (8 years) (actual budget depends on the amount of salt marsh restoration activity involved) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project addresses multiple RESTORE and GoCoast key and priority focal areas, and will complement anticipated substantial investments of RESTORE funds into salt marsh ecosystem restoration. The proposed project will interface directly with restoration projects in the region in order to monitor and document the attainment of normal salt marsh function. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 8,000,000.00	$ -		
	Research and Education	1837	5/14/2014	Determination of the landscape resilience of saltmarshes to crude oil across gradients of riverine inputs and wave energy	The complexity of oil natural removal processes makes the spatial variability of oil residues onshore very high, leading to uncertainty as to how coastal wetlands, influenced by wave, tide and freshwater inputs, will recover from oil spill events among other affecting factors. We propose to study the changes of coastal wetland habitats affected by crude oil over time (4-7 years) at multiple spatial scales, from individual vegetation, to site characteristics of vegetation, to landscape, as a continuation of our NSF RAPID project (award number: DEB-1048342) and Northern Gulf Institute Phase I BP Oil Spill Research (Task order # 191001-306811-04/TO 001), but we propose to switch the focus to longer-term dynamics and larger spatial coverage. A central hypothesis will be tested: coastal wetlands recover faster in the high energy shoreline or with high freshwater inputs than in the lower energy shoreline or when with low freshwater inputs. Based on our short-term data (one year), we have found that photosynthesis in saltmarshes recovered within 4-6 months in the high energy shoreline while photosynthesis was still depressed in the low energy shoreline after one year. We will develop a hierarchical Bayesian (HB) model to integrate data we have already obtained and data that we will obtain at multiple spatial-temporal scales to study the impact by species, individual stress (individual scale), temperature, salinity, elevation (site scale), wave energy, freshwater inputs, distance to shoreline, historical loss rates (landscape scale), as well as initial oil impact level and oil residual (site scale), on vegetation characteristics at the individual (optimum quantum yield of the vegetation: Fv/Fm, and stem height), site (stem density and biomass) and landscape scales (represented by landscape metrics such as patch density and contiguity index distribution, etc.) over time in the contrasting environments. The HB model can simulate complex systems by decomposing the high-dimensional problem into levels of data model, process model, parameter and hyper-parameter within a fully consistent framework (Clark 2005). It allows for multiple sources of stochasticity including uncertainty in latent variables and parameters, and variability from fluctuations not explained by deterministic processes (Clark et al. 2001). Location (City, County): Administrative site: GCRL, Ocean Springs; field sites: saltmarshes in Jackson, Harrison and Hancock Counties Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $360,000 per year (4 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project will provide information on coastline sustainability and improved guidance for developing optimal approaches to saltmarsh restoration. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will provide opportunities to train graduate students in landscape biology and	Jackson, Harrison, Hancock	Yes	No	No	No	No	Yes	No		No		$ 1,440,000.00	$ -		

	Research and Education	1838	5/14/2014	GCRL/MEC educational vessels program replacing the R/V Hermes	The R/V Hermes was built in 1955 and has been a workhorse vessel for GCRL ever since. Its primary mission has been to support the field needs of the Marine Education Program. However, the R/V Hermes has limited capacity and growth of the MEC now requires additional vessel support to provide multiple programs daily field access. GCRL/MEC will seek $200,000 to purchase two pontoon boats, each of which will have the capacity to transport a class of 30 students with educators/chaperones to the barrier islands. GCRL/MEC is developing a long-term plan to provide field-based coastal science programs for all 5th, 8th, and 11th grade students in the coastal region. In order for each student to have an educational experience on the water, new educational vessels and increased carrying capacity will be needed. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $200,000 Annual Operation & Maintenance Cost (# years): GCRL manages its entire vessel fleet on a cost recovery basis. We anticipate usage, invoiced under a day-rate schedule plus fuel, to cover the costs of crew, at-sea use, equipment upgrade, and yearly maintenance. How will this leverage with other RESTORE priority areas or non-RESTORE funds? These new vessels will allow the MEC to expand educational programs, funded by the RESTORE Act. In addition, the GCRL/MEC will be able to develop additional programs with these vessels serving a range of educational needs from teacher training to undergraduate education to educational modules for middle and high schools. This project could fit under any of the buckets under the RESTORE Act funding streams because the vessels will be used to further the educational goals of the Act. It is also meets an important goal of Mississippiâ€™s Go Coast 2020 plan under the Research and Education section: â€œOutreach programs to increase public awareness and understanding concerning the ecological and economic importance of a healthy, sustainable Gulf of Mexicoâ€ (page 64). Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): An educated workforce capable of providing economic expansion consistent with the ecological realities of the Gulf coast begins with education of students and their teachers in a field-based hands-on curriculum.	Jackson	Yes	No	No	No	No	No	Yes	100	No		$ 200,000.00	$ -	Equipment development and purchase
	Research and Education	1847	5/28/2014	Developing aquaculture for stock enhancement of economically important marine fishes of the northcentral Gulf of Mexico	Brief description of activities: The objective of the project is to develop the aquaculture and stock enhancement of marine fishes of importance to the Mississippi Gulf Coast. The project will be developed at the Thad Cochran Marine Aquaculture center (TCMAC) and will focus in a first phase on developing and optimizing technologies to (i) spawn and culture larvae and juveniles of selected marine species with a primary focus on red snapper and spotted seatrout, (ii) tag and release produced fish on natural and artificial habitats off the Mississippi coast, and (iii) monitor returns of released fish to the fishery. Protocols will be refined in subsequent years based on initial results in an adaptive strategy. The expected outcome is a contribution to the restoration of fisheries stock and an increase of recruitment and fishing opportunities in a stock enhancement program. As an example, the release of just 350,000 6-cm red snapper yearly would permit the allowable landings by Mississippi recreational fishermen to double over 2012 recorded landings. Production of red snapper at 500,000 released fish per year is readily achieved by present day GCRL facilities. The aquaculture technologies resulting from the project will allow development of industries producing these species for the food market and creating new jobs on the Gulf coast. The project will also investigate the feasibility of culturing new emerging species (e.g. tripletail, goliath grouper). The technologies will be made available to private entities investing in Marine Aquaculture and the center will support the development of industries through continued research, training and consulting. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $5,000,000/yr (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project builds on an existing partnership between USM and MDMR, partially funded by MDMR, to research stock enhancement of marine species. Stock enhancement will contribute to rebuild fisheries stock and will therefore be synergetic with efforts to restore recreational and commercial fisheries Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The aquaculture technologies that will be developed will be made available to initiate industries on the Gulf coast producing red snapper, spotted seatrout ,or other emerging species resulting in the creation of new jobs. The center will support the development of these industries by providing consulting and training of individuals engaging in marine Aquaculture. In addition, these releases can directly increase the allowable landings for the recreational fishery with concurrent significant economic effects within the tourism and fishing sectors of the coastal economy.	Jackson	Yes	Yes	No	No	No	Yes	No		Yes		$ 50,000,000.00	$ -	
	Research and Education	1848	5/28/2014	Gulf of Mexico tuna aquaculture program	Brief description of activities: Tuna are among the most valuable fishery species in the world and are subjected to heavy fishing pressure. In fact the Atlantic bluefin tuna stocks are severely overfished and stocks are declining at an alarming rate. The Gulf of Mexico is one of only two spawning areas for Atlantic Bluefin tuna and the BP oil spill coincided in time and space with their spawning and larval development on the breeding grounds. The development of aquaculture of tuna will significantly contribute to relieving fishing pressure on wild stocks and can contribute to rebuilding stocks through supplementation. Presently, tuna aquaculture is limited to the fattening of wild caught juveniles in cages. The constraints to development of aquaculture of tuna are a lack of captive broodstock spawning and larval rearing. The Gulf of Mexico Tuna aquaculture program will develop the facilities and technology for the captive reproduction and spawning of yellowfin and Bluefin tuna. Captive spawning yellowfin tuna have been successfully established in one facility on the Pacific Coast of Panama. We will transfer their methods to the Cochran Marine Aquaculture Center. Captive broodstock will be developed and work on the production of juvenile tuna for culture and stock enhancement will ensue. Subsequent to development of a captive population of yellowfin tuna for broodstock development, we will develop a captive population of Bluefin tuna and initiate research on larval rearing that will culminate in the production of juveniles for release into the wild. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County) with participants in all five Gulf states. Infrastructure cost (# years): $5 million over 2 yrs Annual Operation & Maintenance Cost (# years): $2.5 million/yr (10 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The program will incorporate the expertise and facilities of the Gulf Coast Research Lab to develop aquaculture for tuna. The program will provide for economic development through development and expansion of marine aquaculture in coastal Mississippi. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): A new tuna broodstock facility will require construction and materials. Active hatcheries, research programs, and enhancement activities will add jobs to the economy and facilitate the development of a skilled workforce.	Jackson	Yes	Yes	No	No	No	Yes	Yes	15	Yes		$ 30,000,000.00	$ -	

	Research and Education	1849	5/28/2014	Red snapper stock enhancement in support of the recreational fishery of Mississippi	Brief description of activities: GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species for enhancing native populations. GCRL is now poised to develop and apply new marine aquaculture technologies for red snapper in support of coastal restoration, economic expansion, and fishery stock enhancement. Red snapper is one of the most sought-after recreational fish. Reduced federal quotas have significantly impaired profitability of the recreational for-hire industry, with economic impacts throughout much of the tourism sector of the Gulf coast. GCRL is at the forefront of developing intensive recirculating aquaculture of red snapper for stock enhancement. In fact, GCRL is the only institution in the world doing so. Accomplishments include release of over 5,000 juveniles in 2013 in support of rebuilding red snapper populations; and development of copepod production technologies for feeding red snapper larvae. Building on those successes, GCRL is poised to increase production of red snapper in 2013 â€" 2014. Estimates based on NMFS SEDAR assessment growth and mortality schedules for red snapper indicate that the release of about 350,000 red snapper at 6-cm size (about 0.5 years old) would produce enough legal size fish (16 inches) in three years to double the 2012 landings recorded for Mississippi recreational fishermen. The GCRL aquaculture program has the capacity to achieve this level of production with improvements in culture technology. In 2011 (last year of NMFS data), Mississippi saltwater anglers spent $149 million in taking over 1.6 million angler trips in the three coastal counties. Thus, the recreational fishery is an important source of tourism dollars for the coastal counties and red snapper is an important draw encouraging anglers to the coast. Doubling the landings would add significantly to the tourism value of this sector. This project would focus on that goal. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $2,000,000 per year with a minimal duration of 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Thad Cochran Marine Aquaculture Center at GCRL is a leader in the development of intensive, low-water use, high bio-security culture of marine species. The $30 million investment by federal and state partners in the nearly 100,000 sq. ft. of research and development facilities provides state of the art facilities. DMR has been a strong supporter and funder of aquaculture through the Tidelands program. This support is anticipated to continue to provide the basic research to support this project. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The recreational fishery of Mississippi is an important component of coastal tourism. This	Jackson	Yes	Yes	No	No	Yes	No	No		Yes		$ 10,000,000.00	$ -		
	Research and Education	1850	5/28/2014	Improving fish stock assessment and management in the Northern Gulf of Mexico using food web dynamics	Brief description of activities: In the assessment and management of fish and invertebrate resources in the Gulf of Mexico (GOM), a major issue to stakeholders is how the surplus production of stocks should be allocated. In recent years, the priorities of managers have shifted to an ecosystem-based paradigm. In addition to allocating portions of biomass to the recreational and commercial sectors, decisions must be made about how to allocate fish to ensure ecosystem function. It is only with an increased knowledge of the ecological roles of predators and prey populations, that managers can ensure vibrant, economically sustainable fisheries, as well as promote ecosystem resilience. The goal of this project is to collect and analyze the diet compositions of fish resources throughout the northern GOM. We will partner with GOM statesâ€™ resources agencies and expand the capacity of Mississippiâ€™s fish sample program. The objectives of this project are to expand and explicitly implement ecosystem-based fishery management in the GOM by 1.) Describing the productivity dynamics in the northern GOM from zooplankton to the highest trophic levels of fish species using isotopic, fatty acid, and stomach content analysis; 2.) Evaluating the spatial and temporal patterns in diet among the multi-species fish community in the GOM; 3.) Providing a comprehensive understanding of the natural resources used by managed and incidentally caught fish stocks; and 4.) Directly implementing this information into sock assessment and management policy by communicating the results of the studies to industry and NGO stakeholders. Location (City, County): Ocean Springs, Jackson county Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $606,933 per year for 6 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed research project fulfills multiple resource foci by expanding fishery monitoring, building local expertise, creating partnerships, implementing ecosystem-based management, and furthering the understanding of community and ecosystem ecology. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will train graduate students and provide information to managers and decision makers for long-term planning.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,641,598.00	$ -		
	Research and Education	1851	6/3/2014	Impact of climate variability on population dynamics of estuarine, reef and offshore pelagic fishery species.	Brief description of activities: Oceanic-atmospheric modes of variability from the Atlantic and Pacific Oceans have been linked to meteorology, hydrology, abundances of estuarine fishery species (shrimp, blue crab and gulf menhaden), and zooplankton biomass in the northern Gulf of Mexico (GOM). The proposed study will examine the influence of climate-related meteorological and hydrological regimes on northern GOM inshore and offshore nursery habitats which, in turn, affect population dynamics of estuarine and marine species within the region. Biological collections of ecologically and economically important species and associated environmental data from historical fisheries monitoring programs in the northern GOM will be the source of study materials for the project. Target species will include coastal and oceanic pelagic fishes (mackerels, tunas, billfishes, dolphinfish), reef fishes (snappers, groupers, trigger fishes) and estuarine species (gulf menhaden, red drum, shrimp and crabs). Among contrasting climate-related meteorological and hydrological regimes, comparisons will be conducted for nursery habitat characteristics; abundance, dispersal, recruitment, age and growth of pelagic and reef fish larvae; and predator/prey dynamics of estuarine species. Based on the timing of biological collections, numerical models will be used to simulate climate-dependent oceanographic features, flooding conditions in estuarine habitats, and passive transport of offshore larvae (drift pathways). Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,200,000 (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed study addresses RESTORE priorities relevant to ecosystem-based management, coastal ecosystem forecasting and modeling, ecosystem ecology of commercial and recreational species, resource management, and public education and outreach. The project will contribute to greater scientific understanding of ecosystem function and condition in terms of factors regulating population levels of ecologically and economically important species in the region, leading to improved resource management decision-making. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The results of this project will benefit: 1) the scientific community in efforts to understand the population dynamics of northern GOM coastal and offshore living resources, 2) state and federal fishery managers and decision makers charged with resource restoration, management and conservation programs, 3) fishing industries and 4) tourism enterprises.	Jackson	Yes	Yes	No	No	No	No	No		No		$ 1,200,000.00	$ -		

	Research and Education	1852	6/3/2014	Establishment of an effective biomonitoring program to assess and protect coastal fisheries	Brief description of activities: Rapid and accurate assessment of the health status of coastal fishes is a vital component of fisheries management, environmental monitoring, and eco-restoration efforts. Many anthropogenic contaminants from sewage outfall, coastal runoff and accidental release events accumulate in estuarine and marine sediments, leading to increased exposure of sediment-associated species to both higher doses and longer durations than pelagic or planktonic species. Benthic fish species are reliable indicators of overall ecosystem health, and function as sentinel organisms in the event of unanticipated release events. We propose to establish a biomonitoring program that will examine key indicators of toxic and endocrine-disrupting contaminant exposure in two representative benthic species: southern flounder and Atlantic stingray. The Toxicology and Molecular Physiology Laboratories at GCRL are uniquely qualified to monitor validated indicators of exposure, i.e. general stress (immunocompetence, stress steroid hormones), toxin and heavy metal exposure (liver histology, expression of contaminant-induced genes cyp1a and mt), and endocrine disruption (ethinylestradiol, expression of induced genes cyp19 and vtg). Fish will be collected monthly at three stations selected to monitor Biloxi Bay, Davis Bayou and Pascagoula Bay. The fish will be assessed for evidence of anthropogenic impacts using the bioindicators listed above. Consistent monitoring of these species at the same stations over time will serve to protect and maintain healthy coastal ecosystems by: 1) Determining the natural spatial and temporal variability among exposure indicators in GOM sentinel species to aid in management decisions; 2) Establishing un-impacted baseline values to facilitate rapid analysis of impacts from future release events such as Deepwater Horizon; 3) Rapidly identifying areas that are transiently or seasonally impacted by anthropogenic impacts; and 4) Providing a mechanism for identifying unreported or unknown release events. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $336,000/year (5 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project will leverage several additional RESTORE and GoCoast priority areas by providing data that are directly applicable to seafood quality, tourism (recreational fishing), fisheries management, and healthy water resources. Data and outcomes from this program will be used to support proposals for continued funding beyond RESTORE support including federal sources, e.g. NSF LTER. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): This project will employ and train highly technical laboratory staff, increasing local resources	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,680,000.00	$ -	
	Research and Education	1853	6/3/2014	Gulf of Mexico large pelagic fishes tracking program	Brief description of activities: Large pelagic fish species, such as blue marlin, sailfish, bluefin tuna, and yellowfin tuna, inhabit offshore waters of the Gulf of Mexico and often undertake extensive migrations to accommodate various life-history requirements, crossing multiple management jurisdictional boundaries in the process. These species are of significant ecological and economic importance, yet management measures for sustainability of their stocks are often insufficient due to the lack of scientific data, including habitat use and migratory trends. The proposed program would use satellite tag technology as a viable scientific approach for the assessment of habitat preferences and movement patterns of large pelagic fishes, thereby enabling the integration of these data with species-specific biological factors. Use of satellite tags will aid in better defining management jurisdictions specific to each species and will provide a baseline for assessing future episodic events in the marine environment, such as deepwater drilling accidents, that may impact these stocks. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): $250,000 annually for 10 years Annual Operation & Maintenance Cost (# years): $475,000 annually for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed program addresses multiple RESTORE and GoCoast key focus areas, including Eco-Restoration, Seafood, and Research & Education, and pertains to specific priority items for: Seafood Research; Fisheries; Ecosystem-based Management; and Comprehensive Observation, Monitoring and Mapping. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Informed management of natural resources will promote sustainable seafood harvest and production and recreational fishing activities and subsequently benefit associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	Yes	50	No		$ 7,250,000.00	$ -	
	Research and Education	1854	6/3/2014	Quantitative fisheries assessment program	Brief description of activities: Proper fisheries management relies on quantitative assessments of exploited stocks to safeguard against overfishing and depletion of fishery resources. Maintaining the long-term productivity of fished stocks ensures a vibrant and sustainable economic base. Quantitative assessments inform management decisions to restore overfished or otherwise impacted stocks to sustainable levels, thereby creating exploitable production levels for commercial and recreational user groups. Traditional management has relied on single-species assessments utilizing data obtained from the various fishing sectors along with independently collected scientific data for target species. There is growing interest in the implementation of ecosystem-based assessments, which consider, among other things, trophic relationships, competitive interactions and environmental stressors and drivers in assessing the status of individual species and associated ecological components. This proposed program will support a combination of traditional single species assessments and the development of ecosystem-based models for highly valued stocks, such as spotted seatrout, red drum, blue crab, eastern oyster and Gulf menhaden. The program will also identify and address data gaps and deficiencies in current sampling programs so that data inputs are readily available for model runs. The resulting assessments and management recommendations will provide a science-based foundation for the proper and continued management of Mississippi and associated regional fisheries to optimize the economic benefit of those resources. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $215,000 annually for 10 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? The proposed program addresses multiple RESTORE and GoCoast key focus areas, including Eco-Restoration, Seafood, and Research & Education, and pertains to specific priority items for: Seafood Research; Fisheries; Ecosystem-based Management; and Comprehensive Observation, Monitoring and Mapping. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will lead to improved management of the Stateâ€™s natural resources and thereby promote enhanced seafood harvest and production, expanded recreational fishing activities, and associated tourism.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,150,000.00	$ -	

	Research and Education	1855	6/3/2014	Development of a recreational fishery initiative within SCeMFIS (Science Center for Marine Fisheries)	Brief description of activities: The Science Center for Marine Fisheries (SCeMFIS) is a National Science Foundation (NSF) Industry & University Cooperative Research Center (I/UCRC) housed at GCRL which provides academic resources to fishing businesses throughout the Gulf coast. I/UCRC centers are designed by NSF to provide the opportunity for the business community to obtain access to academic science to fulfill their needs. The mission of SCeMFIS is to utilize academic, recreational, and commercial fisheries resources to address urgent scientific problems limiting sustainable fisheries. SCeMFIS is a unique entity because it seeks to simultaneously achieve the goals of sustainable fish and shellfish stocks and sustainable fish and shellfish fisheries. The attainment of these dual goals of sustainable fish stocks and sustainable fishing industries requires a dual focus on (a) the assessment process that determines the status of the stock and (b) the regulatory process that provides the vehicle by which the fishery is managed to optimize stock status while supporting a robust industry. SCeMFIS is unique in being the only federal-industry partnership in fisheries science today that permits the fishing industry to retain a leadership role in designing the science program. This critical attribute assures that the goal of sustainable fisheries will remain a strong component of project design. More information on SCeMFIS is available on its website: http://www.SCeMFIS.org At present the recreational fishing industry is not represented in SCeMFIS because their organizations have not routinely been involved in the assessment process at the level that SCeMFIS intends to participate. Nevertheless, their needs are great â€" witness the disastrous state of the red snapper recreational fishery. This project will permit the recreational fishery to participate in SCeMFIS without the necessity of justifying a large financial commitment to their members, thereby permitting the recreational groups to get involved in the assessment initiatives that SCeMFIS will undertake. It is anticipated that once the value of the center is made clear through their participation, that the recreational groups will continue to participate using funds raised by them from their membership. The project will provide the opportunity for two for-hire groups and two private boat groups to participate for 4 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $100,.000 yearly for 4 years: total $400,000 How will this leverage with other RESTORE priority areas or non-RESTORE funds? NSF will fund SCeMFIS at $175,000 per year. The total SCeMFIS budget this year is about $500,000. SCeMFIS anticipates that this funding level will increase. In addition, SCeMFIS can apply for additional NSF funding to support specific initiatives and for funds to train undergraduates, graduate students, and returning military personnel.	Jackson	Yes	Yes	No	No	Yes	No	No		Yes		$ 400,000.00	$ -		
	Research and Education	1856	6/3/2014	Completion of Shelf and Slope Experimental Taphonomy Initiative (SSETI)	Brief description of activities: SSETI is a long-term experiment designed to evaluate the fate of carbonate on the outer shelf and upper slope of the Gulf of Mexico. These regions include hardgrounds and Lophelia reefs of the type impacted by the BP oil spill. The program is unique in that the experiments have been in place for 20 years, making this the longest running experiment of its kind by more than 15 years. The last retrievals were made in 2006 after 13 years on-bottom time. The program including recovery and analysis can be completed in two years time. SSETI is the single most important dataset monitoring long-term processes of carbonate destruction and preservation over a wide range of shelf and slope habitats. Results have direct implications for understanding the influence of ocean acidification, understanding the processes that result in the creation and maintenance of hardgrounds, and understanding the process of burial and carbonate preservation that provides the single most important sink for atmospheric CO2. Among SSETI sites are the most sensitive deepwater communities in the Gulf: mussel, clam, and tubeworm sites at petroleum seeps and Lophelia reefs. Recovery requires the deployment of a submersible or ROV. These technologies are available. Data analytical methods are well described in a series of papers presenting the status of SSETI after 2, 8, and 13 years. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000 over 3 years. No long-term funding is required: the project can be completed in 3 years. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The project will influence a range of RESTORE programs targeting the outer shelf and upper slope by providing a long-term dataset that can underpin a range of research programs pertinent to restoration and management of deepwater petroleum-rich, hardground, and soft-bottom habitats. Because of its application in carbonate budget modeling by being the longest running taphonomic experiment in history and the only one with concurrent detailed geochemical data, the project will provide invaluable data for any project dependent upon carbonate production (e.g., oyster reef restoration, estuarine management strategy evaluations â€" see an early section so named), Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will support a number of graduate students at GCRL for a period of three years.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,500,000.00	$ -		
	Research and Education	1857	6/3/2014	Petroleum impacts on long-lived deep-water coral and gorgonian ecosystems: The role of seafloor carbonate in deep habitat formation and resilience	Brief description of activities: With the exception of isolated outcrops of bedrock, coral communities on the continental slope depend upon exposures of authigenic carbonate for settlement. We will investigate the development of authigenic carbonate hardgrounds consistent with the stages in the evolution of the coral hardground community and representative of recent anthropogenic influence. These include (1) the formation of hardgrounds by natural petroleum seepage; (2) the development of habitat islands at the sediment-water interface by examining a gradient from reef affected by spilled petroleum/dispersant (Macando MC-252 in path of plume) to reefs upstream of the plume at MC-252), and to natural petroleum seeps at early stages of development (GC 185) and at waning stages of seepage (GC-234 & Vioska Knoll 826). Objective 1: Persistence and incorporation of petroleum/dispersant within hardground and skeletal carbonate: We will compare the framework of the hardground and the skeletal debris field from petroleum/dispersant affected reefs to those unaffected and to carbonate from natural petroleum seeps with respect to the retention of petroleum and dispersant within the hardgrounds and skeletal material using PAH biomarkers, and trace element analyses. Objective 2: Document the development of carbonate hardgrounds from early formation at methane/hydrocarbon seeps, through stabilization as coral-community habitat, and finally degradation, burial, and loss: We analyze young authigenic carbonates from natural petroleum seeps as well as carbonates from extinct seeps that serve as habitat for coral communities. Data will include age, composition, porosity, location relative to seep activity, trace elements, attached coral framework, encrusting epifauna, and response to petroleum/dispersant. Objective 3: Assess the role of local sediment pore-water geochemistry in promoting or prohibiting the development and maintenance of carbonate at the sediment-water interface: We will examine the geochemical milieu to establish whether the local sediments promote precipitation or dissolution of carbonates a) at natural petroleum seeps, b) after seepage stops (and the time when coral communities thrive), and c) after exposure to petroleum/dispersant. Objective 4: Development of the carbonate substrateâ€"deep reef habitat model: We will adapt our reef carbonate budget model by parameterizing it for the stages of hardground development studied and use this model to a) examine the interplay of carbonate production and loss over a range of present-day and expected future environmental and biological conditions and b) develop from this an improved basis for managing these deepwater habitats. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,500,000 over 3 years.	Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,500,000.00	$ -		

	Research and Education	1858	6/3/2014	Deep-sea crab population dynamics in the Gulf of Mexico: larval dispersal and genetic connectivity between northcentral and eastern Gulf populations of Chaceon	Brief description of activities: Understanding the processes that determine regional biogeography, population connectivity and species recovery following catastrophic events is crucial given the increasing number of anthropogenic activities, including resource extraction, that threaten deep-sea ecosystems. Central to identifying strategic information for management and restoration is knowledge of genetic connectivity, larval transport mechanisms, probable source populations, location of spawning populations, and natural historical changes in population sizes. The large variety of interconnected mechanisms that promote or impede the genetic connectivity of deep-sea species via dispersal (and the long-term maintenance of species or the subsequent divergence of populations leading to speciation) are key unknowns to understanding the fundamental evolutionary processes that structure both the diversity and biogeography of deep-sea fauna. Fortunately, the net results of these ecological interactions are represented in the patterns of genetic connectivity of the constituent species. We are targeting the red crab (Chaceon quinqueedens) and the golden crab (Chaceon fenneri) for study as ecological, chemical, and biological data are available for Gulf of Mexico populations prior to the Deepwater Horizon oil spill. Assessment of population recovery in the Gulf of Mexico via population genetic connectivity will provide fundamental new insights into the genetic, taxonomic, ecological, and evolutionary aspects of deep-sea species in the Gulf of Mexico. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None; Ship time included in yearly cost Annual Operation & Maintenance Cost (# years): 3 year project; $1 million/year How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project directly addresses research and education objectives concerned with population genetics and connectivity, eco-system ecology and management, and fishery economics as Chaceon species are harvested in the GOM and along the Atlantic Coast. Partnership with the Woods Hole Oceanographic Institution and with the Florida Marine Research Institute will provide needed expertise and access to existing biological and fishery data, respectively. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The study will provide employment opportunities for individuals with scientific and technical backgrounds.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	
	Research and Education	1859	1/1/1900	Genetic monitoring and repository of genetic resources for important Gulf fish species	Brief description of activities: Efforts to assess the effects of environmental stressors such as the Deepwater Horizon oil spill on populations of exploited fishes are limited by the absence of baseline reference data on affected fisheries stocks. In particular effects of such stressors on genetic diversity and population structure are especially difficult to document because available data for most marine species are insufficient in terms of genomic coverage and temporal and spatial sampling. In this project, selected species of economic importance and differing in their life history and habitat use (coastal/estuarine dependent, reef associated, pelagic) will be surveyed in the Gulf of Mexico and regionally to establish a robust database of genetic resources and temporal and spatial patterns of genetic variation. The database will be developed and maintained over the long term to allow studying comprehensively genetic change induced by environmental stressors on local population if/when they occur. Tissue and DNA databases will be created and genetic characterization will be conducted over a period of 10 years to identify patterns of genetic variation. The data will be made available for assessment of demographic effects on populations exploited by Mississippi fisheries, and to assist in the identification of appropriate genetic resources for stock enhancement and restoration programs when they are needed. For species already cultured for stock enhancement or food production, a repository of genetic resources will be initiated consisting of genetically characterized germplasm. The repository will be made available for aquaculture-based stock enhancement and domestication programs. Location (City, County): Ocean Springs, Jackson County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $1,200,000/yr (10 years) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The project will contribute to the assessment and rebuilding of fisheries stocks and will therefore be synergetic with efforts to restore recreational and commercial fisheries. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The database developed during the project will promote sustainable management of exploited resources. The project will also support aquaculture development both for stock enhancement/restoration and for the food market.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 12,000,000.00	$ -	
	Research and Education	1860	6/3/2014	Implementation of DyPoGEn (Dynamic Population Genetics Engine) to identify significant impacts of resource management options on finfish and shellfish stock connectivity, genetic selection, and genotypic diversity	Brief description of activities: A gene-based population dynamics model, DyPoGEn (Dynamic Population Genetics Engine) has been developed with funding from the NSF Biocomplexity and Ecology of Infectious Diseases programs. This model is configured to simulate the genetic structure and population dynamics of any marine species. The model simulates a population composed of multiple cohorts, each composed of multiple individuals. The age, sex, and genotype of each individual are independently simulated. The genetic structure of each animal is defined in terms of its chromosomal complement, each chromosome bearing a series of genes, each with a series of alleles. This permits the expressed phenotype to be derived from specified genotypes and subsequently to be selected through the normal course of population dynamics. The most recent implementation permits simulations of a series of populations within a metapopulation using larval (and hence gene) transfers based on transfer coefficients derived from a coupled larval-hydrodynamic model. A carbonate-budget model is also coupled to DyPoGEn and responds to the simulated population dynamics ultimately responsive to population genotype. This module is pertinent to species producing carbonate such as oysters and clams. DyPoGEn permits examination of the influence of management measures on population genotype, the development of disease resistance in diseased populations, and the influence of environmental change on population allele frequency and diversity. Of note, amenable to this model are questions related to the influence of fishing on maturity and growth rate of stocks, the influence of disease on oyster populations and carbonate production to sustain habitat, and the influence of freshwater inflow on genetic selection for adaptation to low salinity. This project can be activated to support any genetic analysis or management strategy evaluation where gene-based data are obtained or where issues of genetic bottlenecks or the influence of changes in population connectivity are posed. Location (City, County): Ocean Springs, Jackson, GCRL Halstead and Cedar Point Campuses Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $150,000 per year; period is flexible according to need. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: The project will influence a range of RESTORE programs targeting the fisheries, ecosystem health, marine diseases, and climate change. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will support a number of graduate students at GCRL for the period of its implementation. Depending on implementation goal, the project will support sustainable management of marine resources (e.g., fish, oysters), the development of management measures to mitigate disease, and optimal management of freshwater	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 150,000.00	$ -	

	Research and Education	1861	6/3/2014	Monitoring the rat lungworm	Brief description of activities: The primary goal of this project is to monitor the invasive rat lungworm (Angiostrongylus cantonensis) in coastal Mississippi. The rat lungworm has a complicated life cycle in which the nematode normally develops in the lungs of rodents, especially the Norway rat. It has a severe human health impact. The larval infective stage occurs in terrestrial or aquatic mollusks, as well as in fishes, crustaceans, and other invertebrates. This species initially introduced by rats escaping from ships in New Orleans in the early 1980s is known to have spread from the Mississippi River levee and killed zoo primates as well as horses farther upriver. Infections can occur in fresh and marine waters as well as terrestrial habitats, in aquaculture ponds and in imported ornamental fishes and seafood products. In humans, the worm infects the brain rather than the lungs and causes neurological pathology and occasionally death. The nematode is probably present in coastal Mississippi, and its spread could be further exacerbated by sea level rise. We have already discussed the invasion of the parasite with Centers for Disease Control specialists in infectious disease in Atlanta and will validate and use their molecular tools presently being developed. The project will analyze, using quantitative polymerase chain reaction (qPCR), snails from the three Mississippi coastal counties. The snails will be collected seasonally, especially focusing near areas with the presence of cargo and other ships plus the Norway rat. Where infections are found, fishes and shrimps that may have been in contact with the hosts will be examined for the larvae infective to humans. We can then use these data to see if specific habitats are more susceptible to invasion and determine if remote sensing (offered to us by MSU) can detect these areas. The purpose of this project is not to frighten people from eating undercooked seafood products or handling mollusks but to determine the presence and intensity of infection so that public risk can be determined, evaluated, and followed. Continuing results will be made available to interested parties such as CDC, NOAA, USFWS, MDEQ, MDMR, and Public Health agencies. An attempt will be made to determine how to reduce or eliminate local infections and to inhibit the spread of infective agents into the Mississippi area. Location (City, County): GCRL; field sites in Jackson, Harrison and Hancock Counties Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $230,000 per year for 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? This project would interact well with funds including RESTORE 1603(b), RESTORE 1603(c), NFWF natural resource and environmental restoration projects, BP Early Restoration, and NRDA Restoration. This project will address the key RESTORE priority areas of eco-restoration and mitigation of insults caused by the invasive pathogen.	Harrison, Jackson, Hancock	Yes	Yes	No	No	No	Yes	No		No		$ 1,150,000.00	$ -	
	Research and Education	1862	6/3/2014	Monitoring Dermo in Mississippi oysters	Brief description of activities: We will seasonally monitor oysters in Mississippi for "Dermo." Although both Jackson and Hancock Counties in Mississippi have oyster reefs that have been commercially harvested, those in Jackson County have been unproductive. We hypothesize that fatal infections by the protist parasite Perkinsus marinus (commonly referred to as â€œDermoâ€ in young oyster spat play a pivotal role in this lack of success, as part of a complex interplay of salinity, temperature, nutrients, predators, symbionts, and other stressors. We will test for this problem as well as provide data for ongoing oyster management by monitoring for the agent and conducting additional research. Dermo is an infectious agent in the common commercial eastern oyster (Crassostrea virginica) in Mississippi that is known to kill or lessen the quality of the oyster product, but its role in early stages of oyster development is relatively little known. We propose to collect oysters seasonally with cooperation of DMR and evaluate the prevalence and intensity of Dermo infection in young spat, juvenile, and adult specimens from different Jackson County locations and compare them with infections in monitored Hancock County reefs. We will use quantitative polymerase chain reaction (qPCR) that detects precise levels of the pathogen, even at initial stages of infection. We will complement the field monitoring with laboratory and field experiments with laboratory-reared spat and wild oysters. We have over 40 years experience working with oyster diseases and symbionts, including conducting Dermo culture assays for DMR and other agencies. In addition to publishing our results, we will incorporate monitoring results in Oyster Sentinel (www.oystersentinel.org), a Website treating Dermo in the eastern oyster as an indicator of environmental health in the Gulf of Mexico from Texas to Florida. Results from this study will aid Eco-Restoration management for oyster reef recovery, will inform decision-making agencies involved in reef management as well as replenishing failed reefs by relaying oysters from other reefs, recommending addition of freshwater input, and other strategies. Location (City, County): GCRL with field sites in Jackson and Hancock County Infrastructure cost (# years): None Annual Operation & Maintenance Cost (# years): $225,000/year for 5 years How will this leverage with other RESTORE priority areas or non-RESTORE funds? Successful Eco-Restoration of living coastal and marine resources requires research to understand and monitor the health of its major species; for seafood resources, this is particularly important. This project would fit objectives included in RESTORE 1603(b), RESTORE 1603(c), NFWF natural resource and environmental restoration projects, BP Early Restoration and NRDA Restoration. This project will address the key RESTORE priority areas of restoration and mitigation of seafood impacts caused by	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 1,125,000.00	$ -	
	Research and Education	1874	6/21/2014	COASTAL WATER GUARDIANS (an Education, Intern & Apprenticeship project)	This project involves education, research and internship opportunities for coastal high school, college and university scholars. For those enrolled in marine education programs, this would incorporate "hands on" opportunities. During the planning process, meetings will be held with coastal high schools and institutions of higher learning along the coast to determine how to incorporate the project in curriculum and to gain project approval from state and local educational authorities. The proposal includes Harrison, Hancock and Jackson counties. The project provides workforce development opportunities for low-income participants through apprenticeships. Stipends will be provided to learn the skills necessary to play an active role in the restoration and healthy sustainability of natural habitat and coastal waters. Many coastal residents still desire maritime occupations. Unfortunately, for the past several decades, such opportunities have become rare. This program would re-ignite such prospects and create opportunities to learn skills that could enhance employment opportunities, spur economic development, and sustain families along the coast. We should, and must provide an EQUAL OPPORTUNITY restoration, one that ensures ALL RESIDENTS a chance to benefit from the experience and knowledge gained through the recovery and restoration process. If restoration is to be preserved and maintained far into the future,it is imperative that our youth and young adults be educated and prepared to assume this task. Participation can begin as early as the 9th grade for students enrolled in Marine Biology or similar classes. Students enrolled in colleges or universities with Marine Biology classes and/or majors would also be eligible. Youth and young adults are the future stewards and keepers of our land, waters and other natural resources. Summer internships will include stipends to reward student success and provide economic relief. The component will also ease the school to work transition. Upon project approval, Visions of Hope would like to commence formal planning as soon as possible and arrange meetings to initiate the partnership agreement process. The organization''s overall role in this project would include, but is not limited to: COORDINATOR - arrange/coordinate meetings necessary for planning, implementation and monitoring; secure partnership agreements with the various educational and other entities; gather/maintain/disseminate statistical data OUTREACH - disseminate information regarding the project; aid in securing program participants	Harrison, Jackson, Hancock	Yes	No	No	No	Yes	Yes	No		Yes		$ 250,000.00	$ -	
	Research and Education	1875	6/24/2014	High Resolution aerial survey of marine wildlife and marine bird abundance	Population abundance estimates have traditionally been difficult to calculate for migratory and transitory species in the Gulf. Advancements in high resolution video capture, storage and review have made this technology accessible and affordable for wildlife studies, and this project would implement aerial survey methodology approved by BOEM to produce population estimates for sea turtles, marine mammals and pelagic birds in the Gulf. High resolution video is captured by high-flying aircraft, the video is run through a computer algorithm that filters out ships, waves, etc and flags wildlife for human reviewers to identify producing a safer, less expensive, more accurate and reliable assessment when compared to other methodologies. $800,000 Gulf-wide - cost should be shared between states or with federal partners	Jackson	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -	
	Research and Education	2031	11/9/2011	Expanded Real-Time Hydrological Monitoring Program	This project consists of expanding the number of hydrological monitoring stations in the Mississippi Sound utilizing current real-time technology. These stations are used as a marine management tool to aid in fishery resource monitoring and recovery from both natural (hurricanes) and man-made (oil spill) disasters. Currently the Mississippi Department of Marine Resources (MDMR), cooperatively with U. S. Geological Survey (USGS), operates eight real-time data monitoring stations in the Mississippi Sound. A more comprehensive mosaic of stations is needed to fully monitor conditions that affect marine resource populations and their movements in Mississippi waters. Current parameters of water temperature, stage, conductivity/salinity and anticipated additions of turbidity, dissolved oxygen, pH, etc. would be transmitted continually; the data would be available on the MDMR website. Marine resources managers, fishermen, and the general public would have more instant information with which to make fishery decisions. Historical data would be used to correlate studies with fishery occurrences and environmental phenomenon.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No	Yes	$ 400,000.00	$ -	

	Research and Education	2066	10/24/2011	Long-Term Recovery of Gulf Shorebirds and Waterbirds	NOAA Project ID# 11413: This collaborative proposal supports three strategies that contribute to the full recovery of shorebird and coastal waterbird populations impacted by the oil spill, while ensuring such gains are sustained over the long-term. Specifically, the work proposed will: 1) Create and maintain nearly 28,000 acres of seasonal freshwater wetland habitat that completely address the habitat conservation 'gaps' for five important shorebird species, as well as provide demonstrable benefits to an additional 41 species of shorebirds, waterbirds, and waterfowl affected by the oil spill. 2) Increase the regional breeding populations of 37 species of beach and island nesting waterbirds and shorebirds that were directly impacted by the oil spill by 10,000-16,000 birds by improved management of critical nesting and stopover habitat along the Gulf and Atlantic coasts. 3) Ensure bird population gains are sustained through long-term stewardship of their key habitats, thereby avoiding a common shortcoming of conservation actions - that is, diminishing returns over time because of lack of resources to maintain those initial gains. The plan proposed below will ensure the long-term recovery and health of Gulf Coast shorebird and other waterbird populations affected by the Deepwater Horizon oil spill. These strategies are meant to complement, not duplicate, other activities (e.g., coastal marsh and barrier island restoration) that are likely to be undertaken by others and funded through the NRDA process. Key partners include the National Audubon Society, U.S. Fish & Wildlife Service, Ducks Unlimited, American Bird Conservancy, Manomet, Coastal Bird Conservation/Conservian, and Gulf Coast Bird Observatory. In 2010 and 2011, NFWF directed more than $13 million in the Gulf region towards conservation of birds that were likely to be negatively affected by the oil spill. Those innovative investments, developed and implemented collaboratively with federal, state, and private partners, resul ted in unprecedented gains in habitat enhancement, restoration, and protection; direct augmentation of affected bird populations; and increased capacity for regional recovery of imperiled species. This proposal builds directly upon those initial investments.	Gulf of Mexico	Yes	No	No	No	No	Yes	No		No	Yes	$ 71,900,000.00	$ -		
	Research and Education	2075	7/18/2014	MS Observing and Modeling Restoration Network (MSOMRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Hancock, Harrison, Jackson, St. Tammany , Mobile	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 47,000,000.00	$ -		
	Research and Education	2076	7/23/2014	MS Living Marine Resources Restoration Network (MSLMRRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Mobile, Hancock, St. Tammany , Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 49,000,000.00	$ -		
	Research and Education	2085	7/30/2014	MS Habitat Characterization Restoration Network (MSHCRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Harrison, Jackson, Hancock, Mobile, St. Tammany	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 19,000,000.00	$ -		

	Research and Education	2086	7/30/2014	MS Indicators of Stress Restoration Network (MSISRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSISSIPPI Sustained, multi-disciplinary ecosystem monitoring facilitates which provide an understanding of the state of the Gulf ecosystem and how its components change over time are critically needed. Results from monitoring efforts yield baseline data that can provide early warning of potential environmental variability, perturbations, and concerns. The information can be used to prioritize issues for adaptive coastal policy and management, assess damage due to natural and man-made disasters, inform restoration projects, and evaluate long-term trends. Furthermore, ecosystem monitoring information can yield the true value of ecosystem services to the Gulf which in turn can lead to resource management and regulatory decisions that consider the effects of those decisions based on a more complete set of economic factors. This information is critical to resource managers and decision-makers having regulatory, management, protection, and emergency responsibilities. Over the past three decades, the Gulf of Mexico and its coastal communities have been impacted by increasing anthropogenic influences, primarily as a result of human population growth, energy extraction, and coastal development. The impact of severe storms, such as tropical cyclones, has increased as sea level rises, land subsides, and storm buffering coastal wetlands are lost. Because the Gulf supports a broad variety of interests, any of these impacts can result in a wide range of environmental and economic concerns. A fully integrated and sustained observing system that includes ecosystem, oceanographic, and biological parameters would help minimize risk to people and coastal and offshore resources (during various operations (e.g., oil and gas exploration and extraction, maritime operations, recreational boating and fishing activities)) by providing early detection of potential problems and expediting mitigation when the need arises (e.g., identify important habitat and species, assess status of indicator species). Climatological databases or monthly averages are not sufficient for making certain ecological decisions. Present technology is available to provide â€œreal timeâ€ capability for this decision-making. The University of Southern Mississippiâ€™s Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippiâ€™s coastal areas. The integrate plan has been divided into eight cohesive sections to help explain the needs of Mississippi as it is related to the Marine Science processes affecting Mississippi waters. These eight sections areas are:	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes		$ 7,000,000.00	$ -	
	Research and Education	2103	4/1/2015	Erosion Control and Sediment Management in the Coastal Zone	This project would propose to implement several types of sediment control strategies in the Coastal Zone. Surface runoff caused by heavy rains carries sediment, nutrients and chemicals to our streams, rivers and eventually to the Gulf of Mexico. Erosion takes place in all locations without sufficient vegetative cover. Those locations include house sites, industrial sites, timberlands, crop and pasture lands, road sides, stream banks and other waterway locations, recreational sites and abandoned properties such as houses, closed industrial sites, farms, and surface mines. Each site will require a different prescription to solve the erosion problem. Site locations will need to be identified and solutions recommended by trained professionals to assess the severity of the problem and to define the best, most economical solution for each site. There are several conservation practices that can be used to reduce erosion and slow down surface run off. These include the use of cover crops, vegetated field borders , grassed waterways, permeable paving, no-till crop rotations, managing crop residue, tree planting, stream bank stabilization, and the creation and renovation of water impoundments to trap sediment prior to entering our streams and rivers. Some of these water impoundments could also be used for fire protection. Many landowners can reduce or eliminate much of the erosion simply by changing the management practices used or implementing new ones. This will require identification and often education for the landowners to understand why the erosion is taking place, what practices are available to implement and how important erosion control can be for the immediate improvement in water quality for all species downstream as well as for the communityâ€™s long-term water quality. Some sites will experience unusual amounts of erosion during emergency storm events such as heavy rains, flooding and hurricanes. Often these are areas that repeatedly have erosion issues during heavy water flow. Determining a long-term solution for the problem will be the overall goal, but having readily available funding for immediate repairs after these emergency events will greatly enhance the ability for landowners and business owners to diligently make a difference in the overall reduction in erosion and improvement in the water quality of their watersheds. Many emergencies cannot be predicted, but they will happen and the faster a community can respond, the less damage will result from those events.	Harrison, Hancock, Jackson	Yes	No	No	No	No	Yes	No		No		$ 9,000,000.00	$ -	
	Research and Education	2128	9/25/2014	Impact of Suspended Sediment, Water Circulation, and Waves on Marshes and Oyster Beds	We propose to deploy four moorings equipped with a downward looking RDI WorkHorse Sentinel ADCP to measure the currents, Reynold stresses, and suspended sediment concentration (SSC), a Valeport MIDAS DWR Directional Wave Recorder, and four Sondes YSI 6600EDS to measure various parameters such as temperature, dissolved oxygen, salinity, turbidity, and chlorophyll at different depths. The moorings will be deployed for two years. They are placed at four locations for one year and then moved to another four locations for the second year. Guidance for these choices of mooring locations will be gained through application of the SWAN wave prediction model. The moorings will be placed near oyster reefs and/or marshes, preferably in water depths of at least 2 m. We plan to deploy moorings at healthy reefs or marshes and at unhealthy reefs or eroding marshes. Whether we choose reefs or marshes may depend on recommendations from the RESTORE council. If our mooring locations overlap with the moorings that are part of the â€œMississippi Coastal Observing and Prediction Networkâ€ also submitted to the RESTORE council, we will consolidate instruments to reduce costs. To calibrate the SSC ADCP measurements, we will perform monthly surveys at each mooring. These cruises will also be used to maintain the moorings and replace the battery packs. We will measure conductivity and temperature with a lowered CTD and take water samples at various depths. The SSC in these water samples is measured using a filtration system. In addition we will collect bottom sediment cores during each survey to measure the grain size distribution and sediment properties in order to determine the critical shear stress needed for sediment resuspension. The currents recorded with the ADCP and the orbital velocities estimated from the wave heights will indicate how often these critical shear stresses are exceeded, and provide insight into the active governing processes. The sediment distribution, shear stress and moored time series gathered as part of this project will all be leveraged by the modeling efforts submitted separately to the RESTORE council as â€œThe Influence of River Plumes, Hurricanes and Storm Fronts on the Hydrodynamics of the Mississippi Bightâ€ in that suite of model-driven investigations, coastal erosion and oyster bed viability were not focal points, so within this proposal our ROMS model implementation for MS will be expanded to handle wetting and drying (Warner et al., 2013), as well as wind-wave coupling and the sediment transport capabilities of the ROMS-based Coupled-Ocean-Atmosphere-Wave-Sediment Transport (COAWST) model system (Warner et al., 2010). The comprehensive set of in situ measurements will provide a rich data set that reveals key mechanisms associated with sediment loading within the MS, which will inform the development and validation of this near-shore model. With validated erosion and	Harrison, Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes		Yes		$ 1,640,000.00	$ -	
	Research and Education	2129	9/26/2014	Quantifying Water Quality Using Remote Sensing for the Gulf of Mexico	Since this project is Gulf wide, was interested in being considered for Council funding; however, just implementing same proposal in MS waters would be a great benefit to DMR and DEQ's day to day operations. The proposed effort will address the RESTORE Council priority area â€œWater quality monitoring and improvement.â€ The project will focus on establishing a time series (2013 â€“ 2017) of satellite-based water quality products with improved spatial and temporal coverage. Water quality improvements to be achieved include detecting and monitoring: a) coastal river and land discharge points and impacts to estuarine systems; b) spread and dissipation of point source discharges; and c) tracking water quality changes from river discharge. The project will provide for the efficient and effective direction of public resources for the purposes of protecting public and environmental health. Present water quality monitoring programs are limited in the spatial and temporal coverage and cannot rapidly address if abnormal water conditions are occurring. By combining with daily satellite properties this will be remedied and enable rapid assessment of atypical water quality evident with enhanced spatial extent. Decision makers will be provided a capability to respond rapidly and send sampling collection and clean up actions. By continually satellite monitoring the impact of cleanup activities can be confirmed that water quality has returned to normal conditions. Outcome from this project will be improved water quality management in areas along the gulf coast. Decision makers in each stateâ€™s environmental quality agency will have access to an automated web based decision aid that uses real-time satellite data with automated algorithms based in Best Available Science to facilitate critical decisions based on timely and accurate information. Please see detail proposal with description, benefits, and tentative Partners-- Proposal is scalable from just MS waters to the entire Gulf of Mexico.	Harrison, Jackson, Hancock, St. Tammany, Mobile	Yes	Yes	No	Yes	Yes	Yes	Yes	20	Yes		$ 12,000,000.00	$ -	

	Research and Education	2133	10/1/2014	Surface Currents and Wave Monitoring for the Gulf of Mexico	The U.S. Gulf Coast is vulnerable to a variety of risks, including oil/contaminant spills, harmful algal blooms (HABs) and Vibrio, hurricanes, coastal land loss, and navigation accidents. Near real-time information on coastal ocean surface currents, waves and winds are an important element of a coastal ocean observing system necessary for mitigating these risks and for protecting public health and safety, emergency response, the coastal economy and sustainable use of coastal resources. This environmental intelligence, which can be gained through a system of coastal High-Frequency Radar (HFR) stations, can, for example: (1) Improve monitoring of restoration projects (sediment transport, water quality), (2) Help track spilled contaminants and Harmful Algal Blooms to protect public health, water quality, and critical habitats, (3) Help ensure safe commercial and recreational navigation, (4) Enhance search and rescue efforts, (5) Improve ocean and weather forecast models, including those for storm surge, (6) Enhance public beach safety through the forecasting rip currents, and (7) Enhance community preparedness for coastal land loss issues. This project meets the RESTORE Act Plan Comprehensive Plan priorities for habitats, water resources, living coastal and marine resources, natural processes and shorelines, and science-based decisions by developing a U.S. Gulf-coast wide network of High Frequency Radar stations to provide real-time monitoring of surface currents and waves in State waters. These stations are efficient, effective tools for meeting multiple public needs along the U.S. Gulf Coast. The proposal includes Project Management for the procurement, installation, and operation for these sites across the Gulf Coast. Also, includes Data Management for the design and integration to assure data meets all RESTORE-Act Policies and Procedures. Real-time distribution of these data to numerical models, and agency decision makers are included. An Outreach component is included to work with the Public and Agency Decision Makers, to assure the understanding and training is in place to integrate these user-friendly products in to day to day operations of each agency.	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	20	Yes		$ 20,000,000.00	$ -	
	Research and Education	2139	10/6/2015	Reduction in post hooking sea turtle mortality	This proposal will develop new technology to reduce sea turtle mortality by developing methods to remove fishing line without removing endangered sea turtles from the water. This new method will be designed for inshore fishing from piers and bridges . The Endangered Species Act can shut a fishery down after a certain number of takes accure. The device I have designed will not require a fisherman to haul the turtle up in the air to the pier surface inorder to cut the line from the hook.. We will collect data and film our interactions with the device and the line. I will call IMMS to come collect the turtle. After proof it works as it should then we will share our information.!We will then do outreach and education to encourage the use of this technique by our Coastal recreational fishermen. This new technique will address the problems that our recreational fishermen are having in removing their fishing line from the turtles that they are interacting with while fishing in state waters. There has been increase interaction with these endangered species and this new technique will help with their protection. We will then be able to expand the use of this new method to other areas to help address their interactions with these endangered sea turtles. This device could be used as a midigation tool for a section 10 permit for the states. The data shows that these sea turtles die from becoming entangled in the line that was cut from the pole and left on the hook. A turtle can survive a hook but not fishing line. It causes them to drown and get infections. The new device would slid down the line and cut the line off at the hook without harming the turtle. This is a win for the turtle, the fishermen and the economy because our piers were not closed and I will supply as many as possible free to the states, the stranding team and fishermen. When this new technique is proven successful. A full report of the study and success of the new gear will be provided to All Gulf Coastal states and NOAA. This project will include providing new gear to be given to Mississippi recreational fishermen as long as the supply of gear is available in this pilot.	Jackson, Hancock, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	25	No		$ 500,000.00	$ -	
	Research and Education	2156	10/28/2014	Synthesis and Decision Management Products	This proposal for an Adaptive Management Decision Tool, is one of the 34 proposals in USM's Comprehensive and Integrated Observation, Monitoring, Mapping, and Modeling Plan for MS. We propose to implement management strategy evaluation (MSE) models consistent with the analytical needs of the monitoring program. A MSE is a comprehensive model that includes the population dynamics of the resource, the economic components impinged by the resource (e.g., the fishery for an exploited resource; the business for a farmed aquacultured resource, such as aquaculture or mariculture operations; the value of ecosystem services for a keystone or foundational resource), and the management and political structure leading to the definition and implementation of policy and regulation. The goal of a MSE is to evaluate, using a numerical model, a range of management options to determine the most effective approach to resolve problems. MSEs are most often invoked when problems are complex, typically cross-cutting scientific disciplines, management agencies, and regulatory bodies, and typically grounded in hard science issues, but influenced by a myriad of human and natural components of the system. We describe two examples of problems that would require an MSE model for effective decision management: (1) Marine diseases increasingly affect the integrity of keystone, commercially important, and ecologically dominant species. Oysters, shrimp, and blue crabs are examples. Should we incorporate disease management into the management of resources significantly impacted by disease? What are the Best Management Practices (BMPs) to respond to these challenges? How do we determine the BMP for any given event? Can we respond in a timely fashion to prevent expansion of or mitigate the damage caused by an epizootic once it occurs? Answers to these questions will allow Mississippi marine resource management and scientific communities to be better positioned than they are at present to respond to these eventualities. Some pathogens are capable of introducing enduring regime shifts by modifying habitat structure and function, food web structure, or genetic connectivity, thereby institutionalizing significant economic and ecological damage, making the present-day limited level of preparedness of noteworthy concern. Dermo in oysters is a classic case wherein a disease is capable of generating a permanent regime shift brought on by the loss of reef habitat. (2) One important option for an MSE is to assess options for carbonate management in the coastal zone, to identify the risks of management choices, to weigh long-term outcomes against short-term economic and ecological gains, and to understand the scientific basis for parameterizing carbonate destruction and mass balance models. Management of the habitat quality and natural resources of the estuaries and lagoons of the U.S., a dominant focus of public, private, and academic interests for a half century or more, is receiving even more scrutiny as goals become more stringent, desirable outcomes harder to achieve, and the cost of management more expensive. A wide range of management	Hancock, St Tammany ,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,800,000.00	$ -	
	Research and Education	2161	6/1/2015	Mercury Methylation Rates, Isotopic Composition, and Trophic Transfer in the Northern Gulf of Mexico	Mercury Methylation Rates, Isotopic Composition, and Trophic Transfer in the Northern Gulf of Mexico James Cizdziel, Ph.D., University of Mississippi The Problem. There is a significant gap in understanding the sources and pathways of methylmercury (MeHg) entry into food webs in the northern Gulf of Mexico (GoM). This is of particular concern because, on average, residents of the Gulf Coast consume more marine fish than other U.S. residents, and because GoM fish tend to have higher levels MeHg than fish from other coastlines.1,2 Indeed, as much as 30% of the coastal population is estimated to exceed EPAâ€™s reference dose for MeHg, which is used as a criterion to protect human health.3 Moreover, with the economy of the Gulf coast states intricately linked to the GoM through fishing (both commercial and recreational), understanding the distribution, levels and cycling of Hg species is vital to the long-term health and stability of the region. Recognizing this, the National Science and Technology Council issued a 2004 report on â€œMethylmercury in the Gulf of Mexico: State of Knowledge and Research Needsâ€ identifying major data and knowledge gapsâ€¦ Nearly a decade later the Gulf of Mexico Alliance, Water Quality Team, Mercury Workgroup, developed a White Paper titled â€œMercury Fate and Transport: Applying Scientific Research to Reduce the Risk from Mercury in Gulf of Mexico Seafoodâ€¦ The document lays out many of the same scientific research priorities with the goal of mitigating risk of Hg exposure to humans. Yet there remains a paucity of measurements of MeHg in the Gulf and virtually no progress in answering fundamental questions such as: where in the GoM is MeHg, and where is MeHg most bioavailable (i.e. where does the majority of MeHg enter the foodweb?). The time for action is now. Below is a plan that includes innovative analytical techniques that would finally help to answer these questions. Objectives. The objective of this work is to quantify and compare MeHg levels, isotopic compositions, and Hg methylation rates in a key estuary and coastal area in the northern GoM. We will, for the first time, use recently developed analytical approaches to trace the sources and movement of MeHg from sources through phytoplankton and other primary producers to fish. The educational objective is to work directly with students, including those from Historically Black Colleges and Universities (HBCUs). Research Approach and Innovation There are few measurements of MeHg in the GoM and its estuaries, and this critically limits our ability to assess the sources of MeHg that end up in GOM seafood.3 Estuaries play an important role in the production and transfer of MeHg into primary		Yes	Yes	No	No	No	Yes	No		No		$ 120,000.00	$ -	

	Research and Education	2164	11/6/2014	Monitoring and assessing the health of coastal marshes with remote sensing	Overview and Motivation: Coastal marshes are a critical habitat needed for a healthy Mississippi Gulf Coast. These marshes provide many ecosystem services including; buffers to dampen hurricane waves, habitat for breeding coastal birds, and filtration of terrestrial runoff. Restoration marsh grasses in the Mississippi Gulf Coast is important to restoring the Mississippi Sound estuary. Before these critical habitats can be improved however, we must understand their current health so that we can monitor improvements in marsh grasses and their contribution to the ecosystem services. Project Goal: Use remotely sensed data to assess the marsh grass extent, health and vigor in the three coastal Mississippi counties and monitor changes over time as restoration projects proceed. Project Description: Before coastal marshes can be restored along the Mississippi Gulf Coast, there must be a complete assessment of their extent, health and condition. This assessment must be completed for the entire Mississippi Gulf Coast synoptically so that differences in marsh grass are due solely to health and condition and not seasonal variations. Medium resolution remotely sensed data, such as Landsat 8, has the spatial extent needed to cover the Mississippi Gulf Coast and create a synoptic assessment of the coastal marshes. Using the spectral data of these sensors, we can create indices that illustrate plant vigor and health. Where more detailed analysis is needed, high resolution, commercial satellite imagery will be utilized to create in depth analysis of coastal marshes. This synoptic assessment of Mississippiâ€™s coastal marshes is the first step in developing a program to monitor the changes as restoration proceeds. A well-defined starting assessment is needed to measure the effectiveness of a restoration project. The imagery and image processing techniques to be used are well accepted, scientifically evaluated tools that provide consistent and repeatable results. Budget and Timeline Landsat data is distributed by the U.S. Geological Survey for no cost and this imagery will be used for the synoptic assessment of the Mississippi Gulf Coast. Higher resolution commercial imagery can be obtained for $ 27 km2. Completion of the assessment will require 3-4 person months, for a total estimated budget for initial assessment of $50,000. Monitoring of the marsh	Hancock, Stone,St Tammany ,Mobile,J ackson,Pe arl River,Harr ison	Yes	No	No	No	No	Yes	No		No		$ 65,000.00	#######		
	Research and Education	2165	11/7/2014	Environmental Geophysics Measurements for Coastal Restoration	Environmental Geophysics Measurements for Coastal Restoration Dr. Craig Hickey, Dr. Leonardo Macelloni, Dr. Arne Diercks Description: The University of Mississippi proposes to employ relatively inexpensive acoustic, seismic, electrical and other geophysical surveying techniques to collect dense subsurface spatial information about barrier islands, marshlands, and coastal environments that have been negatively impacted by human and natural events. This information will compliment information gathered from visual inspection, local sampling, and remote sensing, creating a more complete picture to inform coastal restoration efforts, including restoring wetlands and barrier islands using dredged sediments. Impacts to the Mississippi Gulf Coast are due to human modification of rivers and streams flowing into the Gulf altering the sediment deposition patterns as well has natural events such as hurricanes which can alter large sections of the landscape. Mitigating or reversing these impacts requires restoration of wetlands and barrier islands using dredged sediments, reintroducing native plants, and reversing alterations to rivers and protecting shorelines from erosional forces. These restoration projects require a multidisciplinary group of scientists equipped with the best information attainable. Much of the information is obtained by visual inspection and measurements obtained by local sampling. Spatially dense information is obtained from remote sensing but the same is not usually obtained for the subsurface. Geophysical investigations are an indirect method of obtaining generalized spatially dense sub-surface geologic information by using special instruments to make certain physical measurements (Reynolds, 2011). Near surface geophysical techniques have been used for geotechnical and environmental problems and several handbooks describing their use have been published (EPA, 1993; ASCE, 1998). A recent handbook has been published on agricultural applications (Allred, Daniels and Ehsani, 2008). Numerous geophysical methods are applicable to coastal restoration and include: acoustic/seismic, electromagnetic and resistivity, gravity, optical sensing, radar, magnetics, as well as others. Most methods can be used on land, within the transition zone (marsh areas), and in the water. Geophysical surveying provides unique and valuable subsurface information to assist with the evaluation of barrier islands, marsh lands, and coastal environments. It has the potential to provide information about the onset of subsidence, location and extent of freshwater aquifers, locations and extent of salt water intrusion, and the location and amount of sand reserves for coastal restoration projects (Andrews et al., 2007). The cost of geophysical explorations is generally low compared with the cost		Yes	No	No	Yes	No	Yes	No		Yes		$ 200,000.00	$ -		
	Research and Education	2168	11/7/2014	Gulf of Mexico Education & Outreach: Training the Next Generation of Environmental Health Managers	In recent years, direct and indirect anthropogenic impacts on Gulf of Mexico, and the Mississippi Sound, coastal ecosystems have reached crisis levels. In addition to the recent oil spill, this region experiences nutrient enrichment and pesticides from agricultural run-off, metals and chemical pollutants from industrial discharge, and a variety of pharmaceuticals and personal care products from community wastewater. These multi-stressors emphasize that as stakeholders and future generations of scientists deal with these increasingly complex environmental issues, they will need training in novel interdisciplinary skills and perspectives that will enable them to tackle these issues in creative ways. Using the GOM as a natural laboratory, we will train graduate students in the varied effects of aquatic stressors using cutting-edge technologies from a diversity of scientific disciplines (i.e., Biology, Chemistry, Engineering, Geology, and Pharmacy), and we will apply these lessons to societal implications (e.g., Restoration Management, Law and Policy). The Environmental Toxicology Research Program [ETRP] at the University of Mississippi studies these issues using a variety of techniques including: 1) Biomarker studies [cellular/molecular processes], 2) Environmental Processes [organismal- to community-level organizational effects], 3) Fate & Transport [chemical analyses], 4) Risk Assessment, and 5) Environmental Remediation. We propose to develop an intensive summer â€œboot campâ€ with broad training and multiple perspectives in these core research areas. Participants will receive training and mentorship from ETRP scientists, as well as collaborators in government and private industry laboratories to prepare them to deal with current and future GoM health issues. Specifically, we will recruit interested students (undergraduate, graduate and high school) and stakeholders from Mississippi communities for month long summer sessions divided between the UM Field Station (Oxford MS) and the MS coast. During the first third of the course, students will receive focused lectures and intensive â€œhands-onâ€ training in water quality analyses and biomarker surveys. The team will then drive to the Gulf Coast Research Laboratory where they will learn field monitoring procedures, and habitat remediation/restoration approaches. We plan to recruit 24 students into each of two summer sessions (i.e., June and July) for a total of 48 stakeholders trained each year. However, if funding will only allow a single cohort to be trained, the budget provided represents the aforementioned training for one month and 24 students only. This education and outreach program can stand-alone based on the efforts of the UM ETRP personnel and their collaborators, but we will attempt to leverage outreach opportunities with other funded Restore Projects to provide greater context for trainees. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No	Yes	Yes	Yes	No		No		$ 391,457.00	$ -		
	Research and Education	2169	11/7/2014	Gulf of Mexico Health Assessment: Instrumentation for Environmental Monitoring	Marine coastal communities of the Gulf of Mexico, and the Mississippi Sound, represent important commercial fishery grounds, as well as habitats that support threatened species and provide essential coastal protection and recreation opportunities. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to the GoM have resulted in significant damage and loss of these critical ecosystems and the species they support. Thus, the management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. This requires cutting edge monitoring strategies that focus on measuring the concentrations of contaminants: 1) in local seawater and sediment, and 2) in species tissues. We propose to acquire two incredibly powerful monitoring instruments to enhance the existing University of Mississippi Environmental Toxicology Research Program [ETRP] resources. Specifically, we will upgrade our existing Gas Chromatography/Mass Spectrometer (GC/MS) to address contaminant concentrations in seawater and sediment at resolutions that are approximately an order of magnitude more sensitive than our current instrument. Likewise, we will also upgrade the ETRP Synapt proteomics mass spectrometer workstation to include a MALDI TOF interface to measure contaminants in tissues of affected species. While our current resources enable us to perform the studies proposed in other RESTORE proposals (PI: Slattery), these upgrades will provide state-of-the-art instrumentation for UM ETRP researchers, and will provide Mississippi resource managers access to sophisticated monitoring approaches that focus on the fate and transport of contaminants in the environment, as well as the stress responses of affected species in their entirety (i.e., the proteome). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi, & Kristine Willett		Yes	Yes	No	No	Yes	Yes	Yes	100	No		$ 400,000.00	$ -		

	Research and Education	2170	11/7/2014	Monitoring the Health of Coastal Gulf of Mississippi Hard-bottom Communities	Hard-bottom reefs are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent essential habitats for many important fishery species, as well as threatened marine life, and organisms that produce chemical compounds with potential biomedical importance (e.g., gorgonians and sponges). Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM hard-bottom reefs have resulted in significant damage and loss of these critical commercial resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team of marine scientists, environmental toxicologists and natural product researchers proposes to develop an environmental monitoring program to encompass current hard-bottom reefs along the MS coastline. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the hard-bottom reefs through time by evaluating changes in biomass, biodiversity, and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, lipid and chemical constituents). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS hard-bottom reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM Environmental Toxicology Research Program and National Center for Natural Products Research. However, value added mapping and/or tissue analyses options would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 294,392.00	$ -	
	Research and Education	2171	11/7/2014	Monitoring the Health of Coastal Gulf of Mexico Oyster Reefs	Oyster reefs are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent important commercial fishery species as well as biological sinks of anthropogenic contaminants. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM oyster reefs have resulted in significant damage and loss of these critical commercial resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team from UMâ€™s Environmental Toxicology Research Program [ETRP] proposes to develop an environmental monitoring program along the MS coastline to encompass current and planned deployment of oyster reefs. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the oyster reefs through time including changes in biomass and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, and lipid). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS oyster reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM ETRP. However, value added mapping and/or tissue analyses options would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 287,192.00	$ -	
	Research and Education	2172	11/7/2014	Monitoring the Health of Coastal Gulf of Mexico Seagrass Beds	Seagrass beds are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that represent essential habitats for many important fishery species as well as threatened marine life, biological sinks of nutrients and anthropogenic contaminants, and buffers for coastal erosion and storm surge. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM seagrass communities have resulted in significant damage and loss of these critical resources. Thus, the restoration and management of these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Our team of marine scientists and environmental toxicologists from UMâ€™s Environmental Toxicology Research Program [ETRP] proposes to develop an environmental monitoring program along the MS coastline to encompass current and planned purchases of seagrass communities. Specifically, at each site we will collect replicate seawater and sediment samples (n=10 ea), monthly over the course of one year, for the following fate and transport analyses: 1) fecal coliform levels, 2) PAH concentrations, 3) heavy metal profiles, and 4) the presence of other important anthropogenic contaminants (e.g., endocrine disruptors). In addition, we will monitor the health of the seagrass community through time including changes in biomass and percent cover, as well as biochemical parameters indicative of stress (i.e., changes in proteins, carbohydrate, lipid, and photosynthetic function). The data will be analyzed using appropriate time series statistics, as well as community profiling tools, and a final report will be provided to the appropriate resource managers to encourage and inform improvements in water quality remediation and habitat restoration, while outreach lectures will be provided to convey the results of the study and the implications for the regional stakeholders. While we recommend complete coverage of MS seagrass beds, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a UM field collection team, as well as the laboratory efforts of the UM ETRP. However, value added mapping and/or tissue analyses options are would be beneficial (see Restore Projects headed by Easson, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	Yes	No	Yes	No	Yes	No		No		$ 287,192.00	$ -	

	Research and Education	2173	11/7/2014	Integrated geophysical - geological characterization of Mississippi Sound and tributary estuarine seabed	Background The Mississippi Sound and surrounding estuarine areas comprise a large portion of the State territorial waters in a unique geological, physiographic, and economic setting. Vast urbanized coastal areas adjacent to natural and recreational areas adjacent to very shallow water (0-15m) make seabed characterization very challenging. Traditional marine geophysical methods employing seismoacoustic devices suffer strong absorption from the prevalent coarse sediment seafloor, and/or experience high noise levels from signal bouncing in the shallow water, while nearby land requires integration of offshore/onshore geophysical methods (i.e. Lidar topography/multibeam bathymetry, marine/land resistivity). Project goal The project is designed to employ innovative geophysical/geological methods to characterize the geology and morphology of Mississippi Sound and its important tributary estuaries. Geophysical and geological data integration will facilitate the creation of a multi-attribute geo-model and provide the fundamental baseline for restoration/sustainability activities including marine geo-hazards assessment, ecosystem assessment and restoration, contaminants mapping, marine infrastructures, sediment dynamics, beach nourishment, etc. Project Description MMRI-CMRET-NIUST at the University of Mississippi has a long and varied experience in geophysical and geological exploration of the very shallow coastal zone. We have developed/customized geophysical systems to better image the seabed and the shallow subsurface. Multibeam Bathymetry and Side Scan Sonar are used to image seabed morphology, characterize sediment texture, map sea grass, oyster beds, ship wrecks etc.; multifrequency chirp subbottom and Uniboom Seistec profilers image buried reefs, gas pockets, sediment thickness; marine magnetometer surveys image buried metal objects. Geological methods â€" vibra-core, gravity core, grab samples - provide sediment ground-truthing; geological and geochemical analysis characterize sediments and possible contaminants. Electrical resistivity profiles can be acquired in conjunction with seismic profiles to better define fluids circulation in the subsurface, i.e. fresh water table position/depth, buried seagrass, gas, tar and additional hydrocarbon pollution. We also have vast experience in processing and interpreting the various datasets that we collect, often devising innovative techniques to suit particular problems and challenges.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 125,000.00	$ -		
	Research and Education	2174	11/7/2014	Assessing fish stocks using horizontally scanning sonar	Description: Restoration of the aquatic habitats of rivers draining into the Mississippi Sound, and of the Sound itself, is a goal of significant interest to the people of Mississippi. Improving the quality and quantity of fish stocks can be have a major economic impact on the Gulf region by enhancing both sport and commercial fishing industries. The purpose of this proposal is to provide a low-cost, autonomous device for the acquisition of the data needed by the Mississippi Department of Environmental Quality (MDEQ) and other stakeholders to monitor the physical condition of near-shore and coastal fisheries, thereby providing a metric for assessing the progress and ultimate success of restoration efforts. It is also worth noting that the proposed device may find of special utility both in the initial decision-making process regarding proposed development in or near Essential Fish Habitats and also during and following any permitted development by monitoring fish populations, thus providing a means of ground-truthing predictions of impact with observational data. We are proposing to leverage the considerable expertise acquired at the National Center for Physical Acoustics (NCPA) and the University of Mississippi (UM) during its previous federally funded research and development project on the counting and sizing of catfish stocks in commercial aquaculture ponds (Chambers et al. 2002, 2010; Heffington et al. 2006). Specifically, we propose to adapt two existing high-frequency (420 kHz) horizontally scanning sonar systems that were originally developed to size and count catfish in commercial catfish ponds to perform a similar task in rivers draining into the Mississippi Sound or in the sound itself. A typical catfish pond ranges in size from 0.04 to 7.2 hectares, with the most desirable size being about 4 hectares. Such ponds are typically about 100 meters in length and 1 to 2 meters in depth. The current device can accommodate this and deeper areas of most rivers and of the Sound itself, if desired. The current version of the sonar is capable of 1-cm (0.4-inch) range resolution combined with an approximately 100-meter (109-yard) maximum range. Areas of lesser depth can be sampled by use of higher frequencies, e.g., 1 MHz, although at the cost of reduced range. Use of the system may be divided into two parts, calibration and experimental measurements. The calibration procedure is necessary to correlate acoustic target strength (TS) with the size of fish in the target population. This is described in SRAC Progress Report 23 (2010). Briefly, a seine net is used to collect a sample of fish which are weighed and then allowed to swim back into the river through a PVC pipe. The active element of the sonar scans the region the interior of the pipe, and the		Yes	No	No	No	No	Yes	No		No		$ 215,000.00	$ -		
	Research and Education	2176	11/11/2014	An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Shrimp Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild shrimp fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild shrimp fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20- year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -		

	Research and Education	2177	11/11/2014	An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Wild Crab Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild crab fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The wild crab fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -	
	Research and Education	2178	11/11/2014	An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi	Brief Title: An Economic Impact Time-Series Model of the Oyster Fishery in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: A series of man-made and natural disasters have impacted the wild oyster fishery in coastal Mississippi, beginning with the impact of Hurricane Katrina and continuing through the disaster recovery processes associated with the Mississippi River flooding and opening of the Bonnet Carre spillway and the Deepwater Horizon Spill. The oyster fishery is important to the history, culture and economy of Coastal Mississippi. The research project would estimate the economic impact of the fishery over a 20-year period, as data become available. Economic impact analysis will begin with the 2003 harvest and continue through 2023. The 2003 and 2004 years will provide important â€œpre-disaster benchmarksâ€ Monitoring and estimating the economic impact of this fishery (both on the coastal counties and the state of Mississippi) will add to the body of knowledge on the financial contribution of the fishery to these economies. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Among the outcomes will include changes in economic growth due to the industry, and related changes in jobs and income. The College of Business will supply the business analytics to support the efforts of GCRL regarding the recovery and restoration of this fishery. Notably, this series of models will serve as a prelude to the development of an economic impact forecasting model based on expected commercial yield and other outcomes. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): $100,000 (1 year)	Harrison	Yes	Yes	No	No	Yes	No	Yes	16.7	Yes		$ 600,000.00	$ -	
	Research and Education	2179	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Tourism Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ___Infrastructure ____ Educational program __x__ Research program __x__ Workforce development _x__ Economic development ____ Eco-Restoration __ __ Seafood __x__ Other (Name): Tourism Brief description of activities: The tourism industry is known to be a significant component of the economic activity portfolio on the Mississippi Gulf Coast. One unique and significant aspect of the tourism industry in coastal Mississippi is the combination of a coastal environment and casino gaming. With limited resources, it is vital to invest in areas that yield the highest lifetime economic impact and to diversify where possible. However, there is no known comprehensive time-series assessment of the economic impact of tourism activities by sector in coastal Mississippi, nor is there any known collective effort to better understand who visits coastal Mississippi and why. The research project would model the economic impact of tourism activities annually over a ten-year period in coastal Mississippi and, subsequently, on the State of Mississippi. This project would also entail measuring behavioral perceptions and intent throughout this period. Among others, primary sectors in the overarching time series assessment would include casino gaming, beach and marine-related tourism, festivals and other annual events, eco-tourism, arts and museum tourism, sports tourism, and wildlife tourism. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Economic impact analyses will be conducted in the aggregate and by tourism segment to determine the effects on all sectors of the economy to include support amenities such as restaurants and bars, and hotels and lodging. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area.	Harrison	Yes	No	Yes	Yes	Yes	No	No		Yes		$ 15,000,000.00	$ -	

	Research and Education	2180	11/11/2014	A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi	Brief Title: A Comprehensive Economic Impact Time-Series Model of Recreational Marine Activities in Coastal Mississippi Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438 and Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402 Type of project: ____Infrastructure ____ Educational program __x__ Research program ____Workforce development _x__Economic development ____ Eco-Restoration __x__ Seafood ____ Other (Name): Brief description of activities: Marine recreational activities are abundant on the Mississippi Gulf Coast, and this â€œblue economyâ€ is widely believed to significantly impact the local and state economies. However, there is no known comprehensive assessment of the economic impact of these coastal activities in Mississippi. Through extensive primary data collection, this research project would model the annual economic impact of coastal marine recreational activities over a ten-year period on both coastal Mississippi and the State of Mississippi. Activities in the annual assessment would include recreational fishing, onshore and offshore charter boating, big game fishing tournaments, recreational boating, and recreational activities on marine and inland waterways. Using established and conventional modeling software, a customized economic impact model will be built and maintained for the lower six counties in Mississippi to support the research agenda. Annual economic impact analyses will be conducted in the aggregate and by activity segment to determine the effects on all sectors of the economy to include support amenities such as boat sales, bait sales, marine equipment sales, harbor revenue, etc. Among the outcomes will include changes in economic growth, and related changes in jobs and income. The College of Business will supply the ongoing business analytics for this effort, which fills a significant and critical research gap in this area. Location (City, County): Long Beach, Harrison County Infrastructure cost (# years): None	Harrison	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 9,500,000.00	$ -		
	Research and Education	2181	11/11/2014	Continuous record of water quality for evaluating restoration impacts (nutrients, trace metals, microbial communities and physical measurements)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. To deal with theses shortfalls, we have been developing and utilizing continuous fluid samplers (OsmoSamplers) for oceanic, estuarine, riverine, and land-based borehole research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing (Jannasch et al., 2004). Such systems have been designed for studies lasting days (samples every 15 minutes) to 5 years (samples every week). Samples also can be preserved in situ to stabilize dissolved metals, nutrients and microbial community structure (Robidart et al., 2013). We propose to deploy new state-of-the-art water quality monitoring systems that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. We move beyond standard nutrient measurements to included trace metals and microbes. Trace metals can be toxic and are mobilized by excretion of salt glands in Spartina alterniflora and contaminated and natural sediments the latter resulting from changes in redox state. Samples also will undergo standard microbial analyses with a particular interest in Ecoli, an indicator species for human health issues. However, the entire biome will be assessed because not much is known about the temporal aspects of microbial structure and function in these environments.	Jackson,Harrison	Yes	No	No	No	Yes	Yes	No		No		$ 380,000.00	$ -		
	Research and Education	2182	11/11/2014	Continuous Monitoring of Subsurface Water Quality (Nutrients, Metals, Salinity, Pressure) using Pizometers (Boreholes)	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Within marsh environments nutrients and availability of water affect plant zonation as a function of competition, physical stress and nutrient limitation. Therefore, continuous monitoring of these constituents is essential for restoration projects in Mississippi Sound to understand the temporal aspect of water quality before and during restoration projects and to elucidate the effect of tidal forcing on the subsurface environment. For example, temporal monitoring within sandy march and coastal aquifers show a tidal influence on nutrient consumption and microbial productivity within the system (e.g., Sansone et al., 2008). We propose to deploy novel sampling and sensor capabilities in peisometer (boreholes) within and near restoration projects to monitor nutrient, trace metal, salinity, and water level in the subsurface. Such data will provide an indication of water flow, availability of fresh water, the transport and consumption of nutrients, and the mobilization of metals in response to changes in redox state and productivity of microbial communities within sediment. This proposed work goes beyond standard analyses to include trace emtals because mobilization of urban and industrial sources of trace metals (e.g., Fe, Mo, Cu, Cr, Pb, Zn, Cd, and Hg) through natural redox changes can reach concentrations that are detrimental or toxic in tidal creeks, watersheds, and in the subsurface. The novel system that we propose to deploy couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrient and trace metal concentrations. OsmoSamplers are continuous fluid samplers that have been utilized for oceanic, estuarine, riverine, and land-based borehole and piezometer research (Wheat et al. 2011). OsmoSamplers use osmotic gradients to draw fluids into small-bore tubing. The slow pump rate and small bore result in plug flow, minimizing dispersion (Jannasch et al., 2004). Such systems have been designed for studies of days (samples every 15 minutes) to 5 years (samples every week) and can be designed to preserve samples in situ for later laboratory-based analysis of dissolved metals. We propose to deploy 4 units in representative environments within Mississippi Sound proposed restoration projects for one	Mobile,Jackson,Harrison	Yes	No	No	No	Yes	Yes	No		No		$ 280,000.00	$ -		

	Research and Education	2183	11/11/2014	RETINA: A K-6 STEM (Science, Technology, Engineering, and Mathematics) Program for Mississippi	Restoration and monitoring projects in Mississippi Sound require STEM (Science, Technology, Engineering, and Mathematics)-trained personnel and a community that appreciates the benefits of a healthy ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of proposed restoration projects. To address these deficiencies and to position Mississippi for the future we need to develop a childâ€™s capacity to develop theory-based learning, which is inherent and can be fostered by promoting curiosity and by exposing them to a spectrum of experiences. Such experiences play a vital role in achieving proficiency in science understanding, but unfortunately, a myriad of budgetary and socioeconomic reasons limits opportunities for youth, leaving many economically disadvantaged students trailing in STEM fields (NRC, 2007). To meet these challenges The RETINA Program provides schools with a cost-effective and administratively beneficial way to broaden the scope of student exposure through its STEM curriculum. The RETINA Program is a 50-minute per day program that lasts 5 days. The Program blends formal classroom instructional activities with hands-on, skill development in a team-based setting conducted by the teacher and guided by national science standards that are set for each grade (e.g., ecology and water quality). There are four different activities per grade that are presented during the first four days. Activities are chosen with the intention of integrating technology under the umbrella of a scientific process and are designed to provide consistency and a continuum of difficulty among the grades. The program focuses on interactive participation in the design and development of simple robotic and sensor systems, providing a range of challenges to engage all students through project-based learning and provide a medium for communicating interest, experience, and challenges on the fifth and final day of the program. The RETINA program has been designed, modified, and tested in several diverse schools in California and Vermont. It is now posed to expand. Because RETINAâ€™s hands-on activities require (1) components that may be prohibitively expensive in todayâ€™s educational fiscal climate, (2) secure storage space, and (3) technology-savvy individuals to maintain systems, the RETINA Program is designed as a traveling program that gives many students access to the same resources. We propose to (1) supply two towed cargo vans with all of the materials necessary for teachers to conduct the educational modules, (2) provide educators with program materials (lesson plan, PowerPoint presentations, homework, instructional videos, and images) and STEM professional development sessions, (3) introduce the RETINA Program within school systems to engage students, and (4) organize a community service organization to provide technical and logistical support to maintain and refurbish modules and to transport cargo vans from school to school.	Pearl River,Washington,Hancock,Stone,St Tammany,Mobile,Jackson,Forrest,Perry,Harrison,George	Yes	No	No	No	Yes	Yes	Yes	20	Yes		$ 570,000.00	$ -	STEM Curriculum
	Research and Education	2184	11/11/2014	Marine data collection design competitions for Mississippiâ€™s engineering students	Overview and Motivation: The collection of restoration science data in the Mississippi Gulf Coast will require the development of innovative new sensors and deployment platforms. New sensors are needed to efficiently collect important chemical and biological data to characterize the health of the Mississippi Sound Estuary. In addition to the sensor designs, new, low cost deployment platforms are needed to provide the vehicle to integrate the sensors into efficient data collection systems. Project Goal: Create a yearly design competition among engineering and engineering technology students at all Mississippi universities that will address the needs of the restoration science community and provide critical science data. Project Description: Collecting ecosystem data in a marine environment requires interdisciplinary engineering design to create compact and robust platforms that can be easily deployed and recovered. These data collection platforms must operate in the marine environment of currents, salinity and interference from fishing boats. The design of marine data collection platforms will require students to work as teams with representatives from different engineering disciplines. Based on the requirements developed yearly by the restoration science community, students at Mississippi universities will research and design solutions for new data collection platforms. These designs will be judged by a committee from the university and restoration science community and a prototype of the winning design from each university will be built. The prototypes will be judged and the winning design will be built and deployed to collect the needed data. The Mississippi Mineral Resources Institute (MMRI) at the University of Mississippi has a long history of designing, building, deploying and recovering marine data collection platforms. We will use this expertise and the resources of the MMRI Marine Technology shop to build multiple copies of the winning design, deploy and recover them in the Mississippi Gulf Coast. Budget and Timeline Each team would be supplied with a budget of $1500 per year for materials and supplies. The cost of working prototypes, with all instruments, would be dependent on the cost of required instruments and is estimated to be $150,000 per year. The cost to build, deploy and recover the final winning design is estimated at $250,000 per year, including instruments, for a yearly cost of	Hancock, St Tammany,Mobile,Jackson,Pearl River,Orleans,Harrison	Yes	No	No	No	No	Yes	No		No		$ 425,000.00	$ -	
	Research and Education	2185	11/11/2014	SS-ROV Summer Camp - Take the Plunge into a Week-long Day Camp for 6th-8th Grade Students	Restoration and monitoring programs in Mississippi require STEM (Science, Technology, Engineering, and Mathematics) -trained personnel and an enlightened, educated community that is cognizant of the need for a healthy coastal ecosystem; however, there is a deficiency in both that could stunt the growth, continuity and quality of such proposed programs. Middle school students, in particular, are at the crossroad between a future in a STEM career and one that typically lacks scientific and environmental influences. To engage this demographic, we have developed the SS-ROV (Seafloor Science and Remotely Operated Vehicle) summer camp, which is a unique STEM-oriented summer program offered to students entering grades 6th to 8th. We propose to offer the SSROV Summer Camp throughout the state of Mississippi, but in particular, for this call, in southern Mississippi. SSROV Summer Camp is a week-long day camp that has an overarching theme that mimics activities aboard an oceanic research vessel. The science program is based on exploration and exposing students to test new ideas and concepts in a stimulating, confidence building atmosphere. Within this scientific theme students are engaged in challenging project-based and team-oriented problem solving activities. These activities represent functional technologies that are needed to achieve successful real-life missions and lead to the students creating innovated missions that the students devise. During the camp, students are challenged to effectively communicate, create, and solve problems while completing practical projects and preforming real-world tasks. Worksheets, schematics and instruction guide students toward success and understanding in technical and scientific activities such as: -Scientific method -Seafloor Exploration techniques -Electronic circuits and components -Underwater robotics -Marine ecology -Quantifying ecosystem composition -Automated benthic rovers -Sensor calibration and data interpretation -Group communication and collaboration	Hancock, Stone,St Tammany,Jackson, Pearl River,Forrest,Perry, Washington,Harrison,George	Yes	No	No	No	No	Yes	No		Yes		$ 40,000.00	$ -	STEM Curriculum

	Research and Education	2187	11/11/2014	A Hands-on Ecology-based STEM (Science, Technology, Engineering, and Mathematics) Activity for 4th Grade Students	Restoration and monitoring systems in Mississippi require STEM (Science, Technology, Engineering, and Mathematics) -trained personnel and an enlightened, educated community that is aware of the benefits of these actions for the future health of the Mississippi Sound and for maintaining or improving all of the activities and benefits that mankind has expected from the Mississippi Sound. One of the best ways to reach a community is by providing an exciting and stimulating hand-on activity to student that relay this excitement to their parents. Given the breadth of potential science and engineering topics that excite children, we propose to focus on interactive participation in the design and development of simple robotic systems through team-based and project-based learning. Thus, young students experience discovery through technology in a collaborative atmosphere. We propose to extend an educational/outreach program that is currently operating in northern Mississippi to Southern Mississippi and to the entire state. The program introduces fourth grade students to the ecology of seafloor organisms (satisfying national science standards) and a mechanism to study these organisms using underwater remotely-operated vehicles (ROV). The Program begins with an introductory assembly-style presentation to all of the 4th grade students at a particular school. This presentation introduces seafloor organisms, ecology, healthy ecosystems, and the functionality of ROVs while exposing students to potential careers. Then one class at a time is introduced to parts, motors, and switches to build a simple, but functional ROV. Student teams then test the operational capabilities of their ROV and modify their ROV to complete a specified task or to get a desired outcome. The hands-on, interdisciplinary, and applied science nature of this program sets the stage for fun and rewarding learning opportunity and provides a real-world framework for understanding ecology and technologies that are active in the Gulf of Mexico. When students are finished with the ROV activity, they are given a sticker and homework (that can be completed in class) to provide a foundation for discussing the activity with siblings and parents. We propose to expand this program to reach many of Mississippiâ€™s 447 elementary schools. We request $95K for salaries, supplies, and travel (gas/lodging) to reach 80 individual schools (~8,000 fourth grade students) with the help of volunteers and unpaid student interns.	Hancock, Stone,St Tammany ,Mobile,J ackson,Pe arl River,Forr est,Perry, Washingt on,Harris on,Georg e,Hancoc k,Stone,St Tammany ,Mobile,J ackson,Pe arl River,Forr est,Perry, Harrison, George	Yes	No	No	No	No	Yes	No		Yes		$ 95,000.00	$ -	STEM Curriculum
	Research and Education	2189	11/12/2014	Development of a Statewide Engineering Innovation Program for Marine Science Applications in Support of Mississippi Sound Restoration Projects	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€. However, the number of trained engineers from institutions of higher learning that have a understanding of the challenges associated with working within the marine sector are insufficient and donâ€™t meet community needs. For example, remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). We propose to make an investment in the education of engineers at the college level within the state of Mississippi, by exposing students to challenging engineering applications in the marine world, thereby opening the door to a plethora of potential careers. To accomplish this feat we will team up with Dr. Chris Kitts, Associate Dean of Research and Faculty Development, School of Engineering, Santa Clara University, who is funding by the Kern Family Foundation to develop a multi-institutional, cooperative, engineering program in which teams of students engineers and mentors design and fabricate instruments, platforms, and/or sensors. These products are integrated among the various university-based teams to complete a specified task that accomplishes a scientific goal. This successful and long-standing program incorporates a dozen universities in the Midwest, where the Kern Family Foundation wants to make a difference. Building upon this successful program, we propose to a similar program within the state of Mississippi to integrate each of the schools of higher learning with an engineering program. The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for different sensors, vehicles, or platforms that will be developed at each of the participating universities. Student teams will design, fabricate and test their system in context of design criteria. This work will culminate with the teams meeting at the Gulf Coast Research Laboratory in Ocean Springs, MS. Each team will then participate in the mission to collect data for restoration projects. The cost for this program is $160K per year with half of the funds being spent on materials/travel/sensors for engineering teams and the remainder for coordination and science outcomes. Potential Year 1 projects could include, for example, the	Hancock,J ackson	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 160,000.00	$ -	Curriculum development
	Research and Education	2190	11/12/2014	Purchase and Sea Trials of a 4000-m Capable Remotely Operated Vehicle for Marine Science Discovery and Experimentation	The National Oceanic and Atmospheric Administration highlights the importance of the marine sector â€œOne of every six jobs in the United States is marine-related and over one-third of the U.S. Gross National Product originates in coastal areasâ€. An example of the growth in the marine sector is the expectation that remotely operated vehicles (ROV) in 2015 are anticipated to have net revenues of $4B with an order of magnitude more spent on operations. Similarly, investment in AUVs is advancing with a projected increase in more than a thousand AUVs ($2.3B) by 2019 and the growth of sensors and navigational equipment doubled in the 2010-2011 period alone (Lee et al. 2012). However, no deep-water ROV systems for marine science are based in the state of Mississippi or in any of the five states that border the Gulf of Mexico. We propose to make an investment in the infrastructure of Mississippi Marine Technologies though the purchase and sea trials of a 4000-m capable remotely operated vehicle (ROV). The National Institute for Undersea Science and Technology (NISUT), which is a partnership between the University of Mississippi and the University of Southern Mississippi, will take the lead in designing criteria for an ROV that will be suitable for scientific operations within the Gulf. Upon delivery of the ROV, the NIUST team will subject the ROV to sea trials and design and fabricate the various tools that will be needed for scientific discovery and experimentation. The cost for such a vehicle would include a tether, winch, and tether management system, control van, and supply van. The vehicle would have 2 seven-function manipulators. The cost for this the design, purchase, and sea trials is ~$5M and would take 3-4 years to complete the final integration of systems for ocean operations.		Yes	Yes	No	No	Yes	Yes	Yes	100	Yes		$ 5,000,000.00	$ -	Equipment development and purchase
	Research and Education	2200	11/13/2014	Integration of Earth Observations with Computational Modeling to Improve Estuary Water Quality Monitoring in the Mississippi Sound Estuary	Project Goal: To integrate water quality parameters derived from remote sensing with hydrodynamic water quality models to improve the monitoring and assessment of Mississippi Sound estuary. Overview and Motivation: The Gulf of Mexico has received a tremendous of amount of attention lately from government, private industry and the general public. As a result of the Deepwater Horizon oil release, a great deal of attention has been given to restoration of the Gulf of Mexico and as a result of Congressional action, the RESTORE Act was passed. During the Status of Gulf of Mexico conference organized by the Harte Research Institute at Texas A&M University at Corpus Christi, a large number of speakers spoke of the need for science data to monitor restoration projects and to evaluate the potential for success of selected restoration projects. The linkage of remote sensing with hydrodynamic modeling can provide that needed monitoring. Estuaries represent an important component of the complex and dynamic coastal watersheds. They are usually characterized by abrupt chemical gradients and complex dynamics, which can result in major transformations in the amount, chemical nature and timing of the flux of material along these riverâ€“sea transition zones. The ecological functioning of these areas is considered to be of major concern, as estuaries offer the last opportunity to manage water quality problems before they become uncontrollable in the coastal waters. Numerical models are capable of providing hydrodynamically computed water quality data to study estuaries, however, it is difficult to set initialization and boundary conditions and to calibrate and validate the models. Remote sensing data can provide surface observations, but these data are limited by proximity to shore, cloud coverage, and variable spatial and temporal resolution. Mapping and monitoring water quality with remote sensing is also limited to the surface and near surface conditions, with little or no information at depth. Numerical models have the ability to predict, in three-dimensions, the changes in water quality parameters over time, providing coastal management agencies with information needed to evaluate restoration projects for effectiveness. Satellite remote sensing provides a synoptic and multi-temporal view of water quality at different resolutions, spatial, temporal, and spectral. Satellite remote sensing commonly used for water quality parameters includes MODIS, VIIRS and Landsat. With their daily temporal resolution and good spectral bands for water quality, MODIS and VIIRS are ideal for monitoring and	Hancock, Mobile,Ja ckson,Har rison	Yes	No	No	No	No	Yes	No		No		$ 750,000.00	$ -	

	Research and Education	2201	11/13/2014	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems	Commercial Proving Ground for Space to Sea Floor Environmental Monitoring Technologies and Autonomous Airborne and Maritime Systems Project Overview and Rationale Testing and validating new environmental monitoring technologies to enable long-term land use planning, management, and sustainability of coastal resources is a foundational precept of community resilience through ecosystem preservation and restoration. Protecting these coastal resources which provide critical ecological services to the communities along the Mississippi Gulf Coast in terms of buffers against storm surge and sea level rise requires long-term dependable, detailed, and proven information to make decisions that affect restoration and preservation outcomes. The National Oceans and Applications Research Center (NOARC) is focused on developing, testing, and validating the commercial applications of environmental monitoring technologies and the information they provide to address Mississippi restoration objectives while enhancing the long-term economic sustainability of this expanding geospatial information industry on the Mississippi Gulf Coast. Expansion and sustainability of this industry and its long term benefit to ecosystem restoration is currently inhibited by inconsistent means to calibrate and validate the basic data sets that underpin the derived resource management information. Scientific sampling designs to determine ecosystem restoration trends and quantified geospatial frameworks to make informed restoration investment decisions are critically dependent on calibrated and quantified data sets of known positional, spatial, spectral, and radiometric resolution. Replicable, calibrated data is the fundamental requirement for measuring spatial and temporal trends in coastal ecosystems that address long-term adaptive management alternatives. This proposal addresses the fundamental requirement for quantified data and geospatial information products by Federal, State, NGO, and private organizations focused on wetland restoration and sustainability. In addition, the long-term viability of this growing environmental monitoring service industry on the Mississippi Gulf Coast is also dependent on proven, demonstrable data and information product performance. The NOARC team will provide a comprehensive test range comprised of calibrated and instrumented target sites as well as highly instrumented and surveyed ecosystem reserves to Mississippi companies and universities to validate data products and derived geospatial information. The Mississippi Proving Ground will provide a unique, competitive edge to our companies and universities as they fully demonstrate and prove new monitoring technologies and information products to broader national and international markets. ä€ƒ	Hancock,Jackson	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 2,500,000.00	$ -		
	Research and Education	3210	11/14/2014	Seagrass Habitat Characterization Using Acoustic and Sedimentological Techniques	Seagrass Habitat Characterization Using Acoustic and Sedimentological Techniques. Dr. Arne-R. Diercks (USM), Dr. Craig Hickey (UM), Dr. Charles Church (UM), Dr. Ian Church (USM); Dr. Davin Wallace (USM) Coastal habitats provide ecological, cultural, and economic value. Seagrass beds within these coastal areas, provide essential habitats for a wide variety of aquatic species and buffer subaqueous sediments from erosion (Green and Short, 2003). As with many barrier islands along the Atlantic and Gulf coasts, seagrasses are found in the lee of the islands, protected from open oceanic conditions. Since the early 1970â€™s drastic losses of seagrasses have occurred throughout the Gulf of Mexico (Dennison et al., 1993). Seagrass communities are exposed to a variety of environmental pressures, ranging from reduction in water clarity, alteration of sediment migration via dredging, direct destruction from boating and commercial fishing and manmade and natural disasters affecting the natural setting of the seagrass habitat (Orth et al., 2006). Time series mapping of seagrass beds at high spatial and long temporal resolution is important for distinguishing the effects of major disturbances from natural variation in seagrass coverage (Dekker, et al., 2005). Methodological differences (e.g., mapping potential seagrass habitat rather than existing seagrass beds) are important in explaining the dramatic decline in seagrass coverage that is apparent when recent data are compared with results of earlier surveys. Seagrass beds are important not only in terms of the plant biomass produced (much of which provides food for bacteria and microscopic organisms) but also as feeding habitats for both juvenile and adult fishes. The major prey categories for omnivorous and carnivorous fishes from seagrass habitats are crustaceans (Hindell et al., 2000). Restoration of Seagrass beds can be achieved by encouraging natural recolonization in areas that have experienced improvements in surface water quality, replanting of rhizomes and over-seeding of bottom areas conducive to growth of seagrass based on their location, sediment properties and environmental conditions. We are proposing to acoustically characterize an existing SeaGrass bed to establish the acoustic signature of the sediment environment that allow growth of seagrass beds. We will support the acoustic work with sediment cores collected in the same areas to calibrate the acoustic data and to get an understanding of the sediment sub bottom structure. Using the acoustic signature plus sediment coring, we propose to distinguish differences that have occurred in the sediment structure of seagrass fields that have disappeared and to investigate potential suitable areas as future seagrass bed sites for coastline restoration. Seagrass beds are an important ecological system that sustain larval fish and crustacean development providing the future for commercial and recreational fisheries in the MS waters. Located at strategic sites, they can slow down sediment transport within the sound, and provide a filtration function, thus stabilizing barrier islands and improving water quality. While we recommend complete coverage of all MS SeaGrass habitats, it is possible that regional resource managers may wish to	Hancock, St Tammany,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,480,192.00	$ -		
	Research and Education	3211	9/1/2015	Project Explore: Students Exploring Their Local Environment	Project Explore is a Pathways project with the goal of interesting students in grades 5-8 in science, technology, education and mathematics (STEM) fields through out-of-school experiences related to the impacts of the 2010 Deepwater Horizon (DwH) oil spill and the ensuing restoration efforts. Our objective is to develop and implement a model that accomplishes this goal through after-school/Saturday activities coupled with a two-week non-residential summer camp relating to natural disasters and ensuing restoration that impact studentsâ€™ local communities. This model will be implemented in a state with very limited informal science opportunities. Each year, 30 students (60 total) in grades 5-8 will be targeted to learn science relating to their local environment in an informal setting. Students will be exposed to a variety of STEM areas and careers through interaction with researchers and educators involved in the DwH restoration efforts. Proposed topics rely heavily on science, but the other areas of STEM are represented in the restoration efforts and will be part of the proposed program. Disciplines represented by Project Explore include life and earth sciences, in addition to foundational concepts in science, engineering and technology, which are derived from mathematics. Students are also exposed to a variety of technologies used by scientists and engineers to address environmental issues. Through their discovery of the impact of a major disaster like the DwH oil spill on their community, students will become better enabled to think globally.	Hancock, Stone,Jackson,Pearl River,Harrison,George	Yes	No	No	No	No	Yes	No		No		$ 150,000.00	$ -		
	Research and Education	3213	11/14/2014	University and College Volunteers for Restoration Projects	Community Collaborations International will deploy teams of university and college volunteers from around the country to participate in a week of service devoted to giving a boost of youthful energy to community based organizations supporting children, families, and the environment on the Gulf Coast. Community Collaborations International began working in the Gulf Coast ten years ago recruiting and organizing teams of college volunteers to assist with Hurricane Katrina recovery efforts. Since then, we have returned every year building relationships and a continuum of sustained impact in the region. Volunteer teams will coordinate their efforts with organizations such as the South Mississippi Land Trust, Audubon Society, Horticulture for Humanity, Gautier Parks and Recreation Department, Mississippi Department of Marine Resources, Boys and Girls Clubs of the Gulf Coast, Gulf Islands National Seashore, Renew our Rivers, and many more. Based on prior year results, we expect 30 universities and colleges to participate resulting in between 400 and 600 volunteers primarily during the month of March. 400 volunteers each committing to a full week of service results in over 12,000 hours of much needed support for community organizations! These students have made a commitment to spend their spring break week focused on meeting the needs of Gulf Coast communitiesâ€¦they work hard and get the job done.	Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes		Yes		$ 410,000.00	########		

	Research and Education	3216	11/14/2014	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the Mississippi Sound	Long-term restoration, recovery, and monitoring of marine mammals and sea turtles in the Mississippi Sound A proposed component in Mississippiâ€™s Strategy for RESTORE Bucket 2, Proposal #2: Creation of a Mississippi Sound Estuarine Program (MSEP) Summary: In the aftermath of BP Deepwater Horizon Oil Spill, larger numbers of bottlenose dolphins and sea turtles have stranded in the northern Gulf of Mexico, and many of these strandings have occurred along the coast of the Mississippi Sound. The proposed project will promote the restoration and recovery of dolphin and sea turtle populations in Mississippi waters through a systematic approach of 1) responding to dolphin and sea turtle strandings; 2) rehabilitating sick and injured dolphins and sea turtles; and 3) monitoring the recovery of wild dolphin and sea turtle populations. Representing apex predators, dolphins and sea turtles are ideal bioindicators of ecosystem health. This project will facilitate understanding of how these species have endured numerous environmental stressors in the northern Gulf of Mexico and foster their future survival in the Mississippi Sound. Participants: 1) Mississippi State University College of Veterinary Medicine (MSU-CVM). The College of Veterinary Medicine operates aquatic animal health diagnostic laboratories at the Delta Research and Extension Center in Stoneville, MS, and at the MSU main campus in Starkville, MS. These diagnostic laboratories serve as regional resources primarily for freshwater fish diagnostics for the Mississippi Delta and East Mississippi; they also conduct freshwater and marine aquatic animal diagnostic analyses on cases from other states. MSU-CVM has aquatic animal health scientists in pathology, bacteriology, virology, parasitology, toxicology, immunology, and pharmacology. 2) The Coastal Research and Extension Center (CREC) (Biloxi, MS). CREC has had a close affiliation with coastal and marine issues since its origination in the early 1970â€™s. The original mission of recreation and tourism associated with the Sea-Grant Advisory Service slowly expanded to include a Coastal Aquaculture Unit focusing on aquaculture suited to the coastal area. Shortly thereafter, the Experimental Seafood Processing Laboratory was created through a cooperative agreement with NOAA. 3) The Institute for Marine Mammal Studies (IMMS) (Gulfport, MS). Since 1984, IMMS has been a leader in marine conservation research and outreach regarding endangered, threatened, and protected marine species in the northern Gulf of Mexico. IMMS played a central role in the response and rescue of these species in the aftermath of the Deepwater Horizon oil spill. In the aftermath of the oil spill, the IMMS responded to and evaluated over 150 dead dolphins and nearly 600 stranded sea turtles, representing approximately 50% of all the dead turtles observed during the spill response. Plan: Systematic surveys of Mississippi Soundâ€™s mainland beaches and barrier islands will be conducted to more effective	Harrison	Yes	No	No	No	No	Yes	No		No		$ 16,520,879.00	$ -		
	Research and Education	3220	11/14/2014	Development of a Gulf of Mexico-wide marsh bird conservation cooperative	Natural resource management and regulatory agencies lacked systematic species-specific distribution or abundance data which could be used to evaluate the effects of the Deepwater Horizon Oil Spill. Marsh birds were an integral part of the Natural Resource Damage Assessment primarily because are excellent indicators of the health of Gulf Coast tidal marsh ecosystems along the Gulf of Mexico. Unfortunately, because of the limited scope of previous marsh bird monitoring and research, extrapolation of these existing data to differing geographic areas and marsh types found across the Gulf of Mexico was extremely limited. Fortunately, a regional monitoring and research framework has already been developed for marsh birds but has yet to be implemented along the Gulf of Mexico. Thus, the fundamental goal of this project is to â€œmaximize the usefulness of marsh bird monitoring data to inform and facilitate conservation and restoration efforts along the Gulf of Mexicoâ€	Hancock, St Tammany ,Mobile,J ackson,H arrison	Yes	No	No	Yes	No	Yes	No		No		$ 12,500,000.00	########		
	Research and Education	3221	11/14/2014	Application of Chemical, Sensory, and Microbial Measurements/Approache s to Determine the Restoration of Marine Fisheries and Environmental Quality in Mississippi Gulf Coast after the BP Oil Spill and Dispersants	The purpose of this proposal is to determine the effects of oil spill and/or dispersants on the quality (chemical, sensory characteristics, and microbial) of representative species of finfish (mullet) and shellfish (oysters, shrimps, and blue crab), and also on environment (seawater and sediments) in Mississippi Gulf Coast. Samples will be collected from different areas that have been exposed to oil and different areas that have not been exposed to oil along the Gulf Coast of Mississippi (in four different seasons; this will need to be repeated 5 times (in 5 different years to get accurate data). Polycyclic Aromatic Hydrocarbon (Acenaphthene, anthracene, flouranthene, pyrelene, pyrene, chrysene, flourene and naphthalene), saturated hydrocarbons, volatile BTEX compounds, biomarker terpane and sterane compounds in seafood products (mullet, blue crab, shrimp, and oysters), sweater and sediments samples will be determined. Sensory evaluation of uncooked and/or cooked seafood will be determined. Microbiological (total count, Vibrios, E.coli, and Salmonella) in seafood, seawater, and sediments will be determined. Protein and lipid compositions of seafood products will be determined. Nutrients and heavy metals in seafood, sweater and sediments samples will be determined. Salinity, turbidity, pH, and dissolved oxygen of seawater will be determined. This proposal would allow us to develop methods/approaches to determine the quality of seafood, sediments, and seawater in the event the oil spill incident happens again in the future. The outcome of this project will allow us to understand whether the Gulf Coast of Mississippi is restored from the BP oil spill and if the seafood produced in the Gulf of Mexico is safe to consume. This may increase the consumers' confidence of Gulf of Mexico seafood, generate new jobs, and improve the quality of life of the fishermen/seafood processors and their families in Mississippi.		Yes	Yes	No	No	No	Yes	No		No		$ 3,500,000.00	$ -		
	Research and Education	3222	11/15/2014	Gulf-wide Bird Monitoring Program	Birds are a conspicuous and remarkable natural resource of the Gulf of Mexico, where they within a diverse array of habitats across the region. Hundreds of species and millions of individual birds are supported by habitats in and around the Gulf. Unfortunately, these coastal habitats are increasingly stressed by a variety of human demands that are often at odds with the value of these habitats as breeding, nesting, feeding and resting areas for birds. Anthropogenic stressors along with more natural disturbances can reduce the quantity and quality of habitats in sensitive coastal ecosystems. Regrettably, the conservation community continues to struggle to design and implement a large-scale, coordinated bird monitoring strategy to inform and facilitate integrated restoration and management of the Gulf of Mexico ecosystem. Mississippi State University and the U.S. Fish and Wildlife Service, in cooperation with a group of partners, have been working to develop a structured framework to identify bird monitoring objectives and priorities. This proposed effort seeks to advance an avian monitoring program by developing and communicating objectives and priorities to facilitate the design and implementation of surveys to maximize learning and improve the efficacy of restoration and management activities.	Hancock, St Tammany ,Mobile,J ackson,H arrison,G eorge	Yes	No	No	Yes	No	Yes	Yes		No		$ 21,400,000.00	########		
	Research and Education	3223	11/15/2014	Understanding the Economic Linkages Between Coastal Restoration and Community Recovery from Damages Associated with the Deepwater Horizon Oil Spill	Background The Mississippi State University Center for Urban Rural Interface Studies (CURIS), holds a mission to provide a clearinghouse of information regarding community socio-economic profiles, changes in land use, community resiliency, economic and disaster preparedness, and economic impacts of natural and technological disasters. Founded in 2005 just prior to Hurricane Katrina, CURIS was funded by the U.S. Department of Commerce through a project titled â€œMitigating Coastal Development Impacts in Rural Communities in the Northern Gulf of Mexico Region: Establishing the Center for Excellence in Coastal Resource Management.â€ The Deepwater Horizon oil spill disrupted the Gulfâ€™s economy, damaged fisheries and critical habitats. In order to understand the magnitude of the Economic Impacts of Deepwater Horizon Oil Spill to the different economic sectors affected, multi-year baseline economic information about each sector was compiled from various secondary sources. Response to disaster fails for a number of reasons including lack of communication between adjacent communities, community officials, state, local and federal officials, relief organizations, and the public. Additionally, prior planning was inadequate. Research that helps communities integrate and strengthen responses will result in better preparation for both predicted and unforeseen disasters and provide necessary short-term responses for those events. In addition to continuing the regional work of the Center, we also propose to strengthen its programming by developing a tool to aid communities in planning for and responding to disasters, regardless of origin. The strategy will be called COAST Growth (Coordinated Organizational Assessment of Strategic Technology). We propose to use a Systems Analysis approach borrowed from engineering to examine how communities on the Mississippi Gulf Coast responded to Hurricane Katrina as a unit. Common processes or redundancies would be determined, and ways to integrate and strengthen processes would be developed. This data could then be used to develop a coordinated approach for other closely associated communities to use for disaster response. This could be used as a community planning, training and response tool. Results from this initiative will reduce money spent by state and local governments for infrastructure related to closely associated communities by targeting commonalities that can be exploited and differences that require closer attention. It also has the potential to mitigate damages from future disasters, regardless of origin, by providing information to aid in all levels of	Hancock,J ackson,Pe arl River,Forr est,Perry, George,St one,St Tammany ,Mobile, Washingt on	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes		$ 467,187.00	$ -		

	Research and Education	3224	11/15/2014	Development of MSLandPlan, a Forest Landowner Outreach and Engagement Effort to Conserve and Protect Private Lands and Waters in Mississippiâ€™s Lower 6 Counties	INTRODUCTION The lower 6 counties in Mississippi contain 1.7 million acres of forestland, and forestland is the major land use of this region. The major watersheds in this region include the Pearl River in the west, the Pascagoula River in the east, and a series of coastal rivers and streams in between. This region supports a number threatened and endangered species in both aquatic and terrestrial environments, including the gopher tortoise and the Gulf Sturgeon. Most of the forestland in this region is owned by individuals or families, with the vast majority of landowners owning less than 500 acres. There are, on average, about 1,500 unique forest landowners per county that own 10 or more acres of forestland. The National Woodland Owners Survey revealed, again, that most private landowners have multiple objectives for their forestland. Forests as a legacy for future generations, enjoyment of scenery, and land as an investment were the top three objectives of Mississippi landowners. Landowners with larger acreages had a much greater interest in timber income than those with smaller acreages. Private landowners are essentially small businesses, but only 10% of landowners have a written management plan that helps them identify and meet their objectives. Forest management plans also recommend strategies that protect soil, water, and other valuable resources. Managing forestland without a written plan is like taking a trip without a road map. This proposed effort will develop MSLandPlan, a robust but user-friendly management plan software template available for use on both computers and mobile devices. We will educate landowners on the importance of a good management plan, and develop a plan for them. Significantly increasing the number of landowners with written management plans will help them make correct decisions for their land, preserve and improve water quality, increase income from the property, and enhance their enjoyment of the land. A key element in the planning process is the use of Best Management Practices (BMPs) which focus on reducing soil erosion and sedimentation.	Harrison	Yes	No	Yes	No	No	Yes	Yes		Yes		$ 591,000.00	$ -		
	Research and Education	3225	6/1/2015	Development of the MississippiSound environmental education program at the Mississippi State University Crosby Arboretum, through the MSU-ES, to foster coastal community resilience	1. INTRODUCTION This proposal seeks to establish and implement a training program for the Gulf Coast region, called MississippiSound, through the Mississippi State University Extension Service (MSU-ES), with the mission of providing training, information, and resources for the general public to foster environmentally-friendly landscape practices. The consumer and community outreach program will encourage Gulf Coast stakeholders to utilize landscape design and management methods that will reduce property stormwater runoff and leaching leading to the contamination of surface and groundwaters. The Mississippi State University Extension Service has an established delivery method for extending knowledge to the public, and a proven track record. For more than 100 years, the MSU Extension Service has provided research-based information, educational programs, and technology transfer focused on issues and needs of the people of Mississippi, enabling them to make informed decisions about their economic, social, and cultural well-being. Extension's overall purpose is to provide education that will empower people to make intelligent decisions relating to their vocations, their families, and their environment. The Extension Service believes that quality of life is affected by the reciprocal relationship between people and their environment and therefore, environmental issues are of great importance. The Crosby Arboretum, located within the Gulf Coast region, is the premier environmental education center in the state of Mississippi, dedicated to educating the public about their environment. The 104-acre interpretive site is owned by Mississippi State University and operated by the MSU Extension Service. The Arboretumâ€™s mission is to preserve, protect, and display plants native to the Pearl River Drainage Basin ecosystem, a major Mississippi watershed. The facility provides environmental and botanical research opportunities, and cultural, scientific, and recreational programs, as well as programs which provide education about the region's biological diversity. The Arboretum also maintains 700 acres of off-site natural areas in the Gulf Coast region, preserved for scientific study. Many rare, threatened, and endangered species of plants and wildlife are found within Arboretum preserves. The mission of the Crosby Arboretum supports the directives of MSU and the Extension Service. The MSU Extension Service provides research-based information, educational programs, and technology transfer focused on issues and needs of the people of Mississippi, enabling them to make informed decisions about their economic, social, and cultural well-being. Agriculture and	Pearl River	Yes	No	No	No	No	Yes	No		No		$ 590,200.00	$ -		
	Research and Education	3226	11/15/2014	Autonomous boat for routine monitoring of water quality (nutrients, trace metals, microbial communities and physical measurements) in Mississippi Sound	The goal of ecological restoration is to provide a productive and sustainable ecosystem that results in the increase in biodiversity and nutrient retention. In near shore marshes, plant diversity and species differences lead to carbon sequestration, changes in water quality and nutrient retention. However, such wetlands are generally either nitrogen or phosphorous limited and the availability of these essential nutrients affects plant community type and species richness. Therefore, an essential step in the restoration of Mississippi Sound is to understand the temporal aspect of water quality before and during restoration projects. Water quality indexes have been based on measurements of DIN, DIP, chlorophyll a, water clarity, and dissolved oxygen; however, because no DIP sensors are available such measurements are made on discrete samples and the availability of sending people to sea. As a result there are limited temporal observations especially on hourly to daily time-scales and when weather is bad. In contrast, studies of submersed aquatic vegetation (SAV) typically focus on off-the-shelf sensors (temperature, salinity, pH, DO, turbidity, light attenuation), but lack critical information about nutrient concentrations. In a separate propose we presented the idea of using continuous fluid samplers in fixed (Eulerian) locations to monitor water quality using a system that couples standard sensor measurements with OsmoSampler systems that are specifically designed to preserve fluids for nutrients, trace metals, and microbial community structure. This provides the ultimate record at fixed points. However, for some monitoring needs there is the desire for a larger spatial coverage (or Lagrangian distribution) and the need for larger volume samples for additional measurements. To meet this need we propose to develop an autonomous surface boat that is instrumented with physical and chemical sensors and capable of collecting up to 48 (500 ml) samples that can be preserved autonomously in the field. Such automation exists for science-based surface craft missions (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and is well suited for operation within the shallow, but busy waters of Mississippi Sound. The benefits of an autonomous boat are many. The boat can be (1) launched and programed by one person, who can monitor the boat locally, with others monitoring results using a web interface from their offices scattered about the state, (2) limits liability by taking the human out of the element while allowing the human to monitor obstacle avoidance sensors and other tracking and sensor systems.	Hancock,Jackson,Harrison	Yes	No	No	No	Yes	Yes	Yes	20	Yes		$ 530,000.00	$ -	Proposed Research Developement	

	Research and Education	3227	11/15/2014	Integrated Assessment of Water Quality in Bay St. Louis and the Hot-Spots of Pollutant Sources in the Sub-watersheds feeding into Bay St. Louis under Different Climate Scenarios	The overarching objective of this project is to develop a suite of tools and products to identify and locate sources, transport pathways, and fate of pollutants flowing into Bay St. Louis, Mississippi, assess their ecological impacts, and develop management strategies. The proposed work is a field, laboratory, remote sensing, watershed modeling, and GIS based research approach focused on quantifying the water quality deteriorating agents found in Bay St. Louis and source-tracking the pollutants detected in the sub-watersheds feeding into Bay St. Louis. We will test the hypothesis that terrestrial nutrient inputs from the watersheds lead to eutrophication in Bay St. Louis Mississippi, which tends to worsen in future because of climate change. The end result will be a Decision Support System (DSS) that will be updated with the images of Harmful Algal Blooms (HABs), sediments and colored dissolved organic matter (CDOM) in near real-time. The DSS will also include visualizations of source-tracking the pollutants using digital elevation models (DEMs) and CDOM fluorescence. Additionally, the DSS will be updated time-to-time with images showing the hot-spots of pollutant sources in the watersheds in different climate scenarios. The first aim of this project is to investigate the water quality of Bay St. Louis by measuring the concentrations of suspended sediments, chlrophyll a, CDOM, nitrogen, phosphorous and a few other ancillary water quality parameters. The second aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) spatial resolution satellite sensors as well as very high spatial resolution remotely sensed data collected by unmanned aerial systems (UASs) and utilizing them for extracting improved water quality products for making the mapped images available in near real-time. The third aim is to track the source of the pollutants and locate the hot-spots of pollutant sources using watershed modeling approach. The fourth aim is to develop maps detailing the classes of water and sediment yields as a response to changes in precipitation, temperature, and CO2 levels under different climate scenarios 20-30 years into the future. The final aim is to disseminate the project findings to four categories of target audience including (1) state and local water managers, (2) MSU graduate and undergraduate students, and selected middle and high school teachers, (3) the general public including the farmers, and (4) the scientific community. The final aim also includes providing the methods and products to the water managers showing the vulnerable regions where best management practices (BMP) should be implemented and the total maximum daily loads of pollutants (TMDL) should be allocated in the sub-watersheds. This research is significant because it will not only enhance the current state of knowledge in identifying the hot-spots of pollutant sources with different climate scenarios but also it will provide a continuous monitoring platform for the HABs, sediments, and dissolved materials, which will support state and coastal community efforts to manage water quality in the region. Since Bay St.		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -		
	Research and Education	3228	11/15/2014	A Time-Series Analysis of Invasive Plant Species along the Mississippi Gulf Coast using Unmanned Aerial Systems, Hyperspectral Sensors and Satellite Remote Sensing Technologies	Invasive plant species are recognized as one of the greatest threats to the survival of many indigenous species. The five Gulf States together including Mississippiâ€™s coastal wetlands are affected by at least thirty species of non-indigenous invasive plant species. Dealing with this enormous environmental problem requires collaborative efforts on the part of many agencies and organizations, but it ultimately begins with detection and mapping of the non-indigenous invasive species. After mapping, a change detection analysis would further help in delineating areas where management efforts should be prioritized to contain the growth of the problematic species. Remote sensing technologies offer an opportunity to address the invasive species problem by providing timely information on the spatial distribution of any plant species, including those that could threaten the ecological balance. The overarching objective of this project is to develop a suite of tools and products to locate and delineate the spatial coverage of ten most pervasive invasive plant species that occur along the Mississippi coast and provide results from change detection analyses extracted from a time-series of geospatial products collected using remotely sensed data. The end result will be a Decision Support System (DSS) that will be updated with the images of invasive species on a monthly basis. The DSS will also include images of the hot-spots of invasive species growth in the areas that were originally dominated by indigenous species. The first aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) spatial resolution satellite sensors as well as very high spatial resolution remotely sensed data collected by unmanned aerial systems (UASs) and very high spectral resolution remotely sensed data collected by a hyperspectral system, AisaEAGLE, flown on an aircraft. The data from the UASs and the hyperspectral data will help develop models, which will be implemented on the data from the satellite sensors for extracting invasive species maps and the mapped images will be made available on a monthly basis. The second aim is to run a change detection analysis to delineate areas of extensive invasive plant species growth that was originally occupied by indigenous species. A trend analysis will also be carried out to locate areas where management efforts should be prioritized to contain the growth of the problematic species. The final aim is to disseminate the project findings to four categories of target audience including (1) state and local managers, (2) MSU graduate and undergraduate students, and selected middle and high school teachers, (3) the general public, and (4) the scientific community. The final aim also includes providing the methods and products to the managers showing the vulnerable regions where management efforts should be prioritized. This research is significant because it will not only enhance the current state of knowledge on the occurrence of invasive species on the Mississippiâ€™s Gulf coast but also it will provide a continuous monitoring platform for at least ten invasive plant species, which will support state and coastal community efforts to manage		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -		
	Research and Education	3229	11/15/2014	A Stormwater Bacterial Decision Support System (SBDSS) for Assisting State and Local Water Managers in Minimizing Beach Closures	The northern Gulf of Mexico waters are affected by water pollution, leading to undesirable increases in disease-causing bacteria (pathogens). Bacterial contaminations of surface waters are an increasing concern for state and local water managers because pathogenic bacteria can cause adverse effects on human health. An array of bacteria such as Vibrio, Mycobacteria and Enterococii are responsible for severe infections in people exposed to sea water or raw shellfish and also pathogenic to a lot of aquatic organisms in the northern Gulf of Mexico. One recent event that made news was the death of a man due to Vibrio Vulnificus infection in Ocean Springs, MS on July, 11, 2014. According to the Centers for Disease Control and Prevention Mississippi had 17 reported cases of Vibrio infections, Louisiana had 52; Florida, 145; and Alabama, 20 in 2012 alone. Since it is difficult, time-consuming, and expensive to test directly for the presence of a large variety of pathogens, studies conducted by EPA suggest that the best indicators of health risk from recreational water contact in fresh water are E. coli and enterococci and for salt water, enterococci are the best. The overarching objective of this project is to develop a suite of tools and products to identify and locate sources, transport pathways, and fate of enterococii flowing into Bay St. Louis, Mississippi from storm-runoff. The proposed work is a field, laboratory, remote sensing, watershed modeling, and GIS based research approach focused on quantifying the suspended sediments and colored dissolved organic matter (CDOM) found in Bay St. Louis, deriving the enterococii concentrations from the correlations of sediments and CDOM with enterococii by accounting for the spatial distribution, intensity and amount of rainfall in the subwatersheds, and source-tracking the pollutants detected in the sub-watersheds feeding into Bay St. Louis. The end result will be a Decision Support System (DSS) that will be updated with the images of bacterial contaminants, sediments and colored dissolved organic matter (CDOM) in near real-time. The DSS will also include visualizations of source-tracking the bacterial contaminants using digital elevation models (DEMs) and CDOM fluorescence. The first aim of this project is to investigate the water quality of Bay St. Louis by measuring the concentrations of bacterial contaminants, suspended sediments, CDOM and a few other ancillary water quality parameters. The second aim is to develop a remote sensing based operational monitoring platform by utilizing data from multiple high (Landsat OLI, HICO etc.) and low (MODIS, VIIRS etc.) resolution satellite sensors as well as very high resolution remotely sensed data collected by unmanned aerial systems (UASs) and utilizing them for extracting improved products for mapping suspended sediments and CDOM, and making the mapped images available in near real-time. The third aim is to apply the Soil and Water Assessment Tool (SWAT)/microbial sub-model and compare the model-simulated bacterial concentrations with the monthly measured bacterial		Yes	Yes	No	Yes	No	Yes	No		Yes		$ 900,000.00	$ -		

	Research and Education	3230	11/16/2014	Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project are: 1. Understanding Stakeholder Beliefs and Perceptions: The First Step toward Effective Engagement, Awareness, Outreach, and Policy Development To formulate effective engagement, outreach and educational programs requires an understanding of the underlying beliefs and values of various target audiences. Every individual, every community, and every culture has a set of beliefs and values that guide decision-making. Through the use of social science survey instruments, the underlying beliefs and values of selected target audiences will be surveyed at the local and regional scales to serve as a basis for effective engagement, technology transfer, education and outreach through the expanded Coastal REACH Program and to serve as a reference to gauge the effectiveness of these efforts. This information should also be very useful to the RESTORE Council as it considers project selection and evaluation. 2. Developing Social Indicators to Guide and Evaluate Coastal Restoration and Protection Projects and Activities Social indicators are measures that describe the context, capacity, skills, knowledge, values, beliefs, and behaviors of individuals, households, organizations, and communities at various geographic scales. Social indicators are typically used to assess current conditions or attainment of social goals related to a variety of applications. Building upon Project 1 (described above), this project will identify and define social indicators that can be used to guide and incrementally evaluate habitat and water quality restoration and protection projects developed to implement the RESTORE Councilâ€™s Comprehensive Plan. The indicators can also be leveraged to serve as a common reference to evaluate the success of individual coastal watershed restoration and protection projects. This foundational project will be designed to support and evaluate many of the activities and projects facilitated by the RESTORE Council by addressing the societal dimensions inherent in the Councilâ€™s Comprehensive Plan. A wide range of questions exist that, if answered and monitored, could help the RESTORE Council achieve the success that it desires, such as:	Hancock, Harrison, Jackson	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 3,200,000.00	$ -		
	Research and Education	3231	11/16/2014	Regional Coastal Land Grant University and Extension Initiative: Disseminating RESTORE Council-facilitated Coastal Restoration and Protection Projects, Activities, Outputs and Outcomes through Annual State-wide Conferences, Gulf-wide Summits and Extension	Establishing a Regional Coastal Land Grant University Initiative: A Coordinated, Multi-state Approach to Integrated Engagement, Research, Technology Transfer, Education and Outreach. Objectives of this project concept are: 1. Establishing a structure and processes for regional collaboration among Gulf of Mexico land grant universities and their coastal Extension programs to foster a consistent Gulf-wide approach that leverages Extension activities and capabilities to support the engagement, technology transfer, education, outreach and extension priorities of the RESTORE Councilâ€™s Comprehensive Plan. 2. Disseminating RESTORE Council-facilitated coastal restoration and protection projects, activities, outputs, and outcomes though annual state-wide conferences, Gulf-wide summits, and Extension Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€“ from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Extension Service. The Smith-Lever Act of 1914 established the Cooperative Extension System, a publicly funded, informal educational system that links the U.S. Department of Agriculture, the land grant university system, and individual counties. Extension, as the off-campus educational arm of land grant universities, has a large footprint in each state with offices in all or most counties and trained staff to provide community education and outreach in multiple disciplines. Extension's overall purpose is education. Its unique interdisciplinary perspective enables the organization to make a real difference through the provision of research-based information, educational programs, and technology transfer focused on issues and needs of the citizenry of each state. Extension also hosts customer-friendly websites loaded with information sheets, publications, reports and other outreach materials designed for its stakeholders. Extension is organized regionally; however, the Extension structure on the Gulf coast is separated into two regions.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ -	$ -		
	Research and Education	3232	11/16/2014	Coastal Land Grant University Initiative: Coastal Storm Water and Waste Water Workshops and On-line Management Toolbox to Advance Effective Storm Water and Waste Water Management along the Gulf Coast and Reduce Nutrient, Pathogen and Sediment Loadings	Land Grant Universities. Land Grant Universities (LGUs) are uniquely positioned to assist each coastal state in a variety of ways â€“ from conducting research ranging from basic discovery to on-the-ground applications of the science of soil conservation, water quality, habitat and ecosystem dynamics, human behavior, and other applications. LGUs in each coastal state have a wide range and depth of expertise in these areas, and are a highly trusted source of objective research-based information. Researchers, Extension specialists and educators put the science into practice by engaging and educating agricultural and business interests, local governments, and urban and urbanizing communities; conducting applied research; and understanding economic drivers that lead to decision making. In addition, faculty in LGUs regularly collaborate on multi-state research and extension education projects. Coastal Storm Water and Waste Water Workshops and On-line Management Toolbox to Advance Effective Storm Water and Waste Water Management along the Gulf Coast and Reduce Nutrient, Pathogen and Sediment Loadings to the Gulf. Pollution caused by storm water continues to be a problem in urban coastal watersheds evidenced by the constant reoccurrence of beach closures and/or advisories due to high pathogen levels after heavy rain events and in agricultural coastal watersheds evidenced by the existence of nutrient, pathogen and sediment impairments. Expanding economic development along the coast is also challenging the capacities of state and local storm water programs and resources. This project is designed for Extension, Mississippi State Universityâ€™s (MSU) Coastal REACH Program, and the Mississippi Water Resources Research Institute (MWRRI) to work with state and local agencies/entities administering coastal storm water programs to increase their engagement, technology transfer, education and outreach capacity and effectiveness through targeted workshops that focus on effective storm water management practices as well as the benefits of various storm water ordinance options available to local communities. In coastal watersheds, numerous TMDLs have been developed for impaired waters that identify specific nutrient and pathogen load reductions from both point and nonpoint sources needed for the receiving streams to meet their designated uses. States are also being encouraged by EPA to make progress on the development of numeric nutrient criteria. Waste water treatment in coastal watersheds uses a variety of treatment systems â€“ from large facilities to cluster systems to individual treatment systems. The reduction of nutrient and pathogen levels in effluent from these systems can be costly at every level. This project is designed for Extension, MSUâ€™s Coastal REACH Program, and MWRRI to first evaluate the preponderance of system type	Hancock, Harrison, Jackson, Pearl River, Stone, George	Yes	No	No	No	No	Yes	No		Yes		$ 450,000.00	$ -		

	Research and Education	3236	11/17/2014	Community-based Environmental Planning and Design Assistance for Living Shorelines and Tidal Marsh Restoration.	Community-based Environmental Planning and Design Assistance for Living Shorelines and Tidal Marsh Restoration. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD, Department of Energy, Small Business Administration, the National Endowment for the Arts, and the Department of Homeland Security, along with many local and regional partners. For the past three years the design studio has been working in partnership with other Gulf Coast planning agencies with the support of HUDâ€™s Sustainable Communities Initiative to produce Plan For Opportunity, a regional plan for a more resilient and sustainable Gulf Coast. Recently, the GCCDS was part of one of ten national design teams selected by HUD to participate in Rebuild By Design, in which teams worked with communities in the North East impacted by Super Storm Sandy to design more resilient future cities. The Gulf Coast Community Design Studio is well experienced in community-based restoration projects. Since 2010 the Gulf Coast Community Design Studio has been working in partnership with several other organizations to restore Bayou Auguste, an inner-city bayou that connects East Biloxi to the Back Bay. The GCCDS is the lead organization and brought together five partners to work together on the restoration project: The Land Trust for the Mississippi Coastal Plain, The City of Biloxi, Biloxi Public Schools, the Biloxi Housing Authority, and a local environmental science firm called Cypress Environmental. For the past year the Gulf Coast Community Design Studio has been doing a Watershed Implementation Plan for Rotten Bayou in Hancock and Harrison County. The planning activities include extensive community engagement and professional workshops as well as designing and installing best practices. The plan is funded by the Mississippi Department of Environmental Quality to the Land Trust for the Mississippi Coastal Plain. In addition to Bayou Auguste and Rotten Bayou, the GCCDS is designing a wetland nature	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 200,000.00	$ -		
	Research and Education	3237	11/17/2014	Job Training for Living Shorelines and Tidal Marsh Restoration.	Job Training for Living Shorelines and Tidal Marsh Restoration. A benefit of the RESTORE funds will be creating a stronger demand for skilled workers to install living shorelines and do work to restore tidal marshes. The skills for such green jobs combine construction and landscaping skills along with a sufficient knowledge of tidal ecology to be able to understand the end goals of a restoration project. The outdoor work environment is demanding and requires good work habits to be safe and productive. What is more, such projects are interesting to the general public and have the potential to encourage people to take better care of the environment. Therefore, the project installers often have opportunity to engage with people on site to explain the project. There is growing interest with private property owners to apply best practices to water front property and instead of rebuilding bulkheads to use more resilient and ecologically beneficial shoreline improvements. So the workers on site should understand the project and be able to explain the benefits of the project to curious site visitors. There will be a need for job training for living shorelines and tidal march restoration. The RESTORE funds for restoration projects can be leveraged to pay for such job training as a way to build capacity for future restoration projects. Many of the jobs created by such projects have pay comparable to building construction jobs and, like building construction, are job skills that are best gained by hands-on learning. The RESTORE funds will have a long-term impact on such emerging green jobs if training programs are part of the community benefits. Partnership The proposal is submitted by the Gulf Coast Community Design Studio in partnership with Moore Community Houseâ€™s Women in Construction Program. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 90,000.00	$ -	Curriculum development	
	Research and Education	3240	11/14/2014	Women in Construction Program	Organizational Overview: Moore Community House (MCH) was founded in 1924 to serve the children of migrant workers in the seasonal fishing industry. Today MCH responds to the needs of low-income women and young children in east Biloxi through two programs that research shows make the most strategic and positive difference in moving a low-income family closer to self-sufficiency: quality affordable early childhood education and job training that leads to higher paying employment. Through the Women in Construction Program (WinC), MCH creates a pathway for low-income women to higher paying jobs in the construction industry. Women make up nearly half of the workforce in Mississippi (MS) but women earn less than men at every income and education level, and in every profession. Women are clustered in low paying jobs, making up 80% of minimum wage workers. MS has the highest rate of single-mother headed families, mothers who bear financial responsibility for children. Minimum wage leaves a family of 2 (mom and child) below the federal poverty level. Construction jobs are the only ones in MS where women earn the same wages as men, and these jobs pay an hourly wage identified by the MS Economic Policy Center as a self sufficiency wage. Thus, WinC offers a pathway for women to family economic security. The mission of WinC is to create a climate across the Gulf Coast enabling women to pursue careers which will allow them to earn wages to promote self sufficiency within the construction field. Besides helping provide well-paying jobs to the region's low-income women, it helps meet industry demands for a trained workforce. While the construction trades offer careers that provide self-sufficiency wages and good benefits, WinC is the only job-training program in the region that is tailored to prepare women for this work. At this point and time it is critical to maintain momentum by expanding programming, reaching more women, and strengthen the community towards economic and ecological recovery. Since inception of the program, WinC has graduated 22 classes totaling 220 plus women in the fields of general construction, welding, green job training, and disaster relief and recovery. Of the 220 plus women who have graduated the program, 75% of these individuals have gained employment. Graduates have gained living wage jobs in apprenticeship and nontraditional occupations in trades such as, welding, shipfitting, habitat restoration, and construction management, earning from $14 to $28 an hour. WinC is feminizing the face of construction on the Gulf Coast one well-trained woman at a time. Qualitative data is used to assess impact that improves socioeconomic wellbeing. Participants have made cross cultural bonds, left abusive	Mobile,Jackson,George,Hancock,Stone,St Tammany,Pearl River,Harrison	Yes	No	No	No	Yes	Yes	No		Yes		$ 1,500,000.00	#######		

	Research and Education	3241	11/17/2014	College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA)	Brief Title: College of Business building, USM Gulf Park and the Center for Coastal Analytics (CCA) Point of Contact, email and Phone #: Dr. Elizabeth LaFleur, Beth.LaFleur@usm.edu, 228.214.3438; Dr. Gregory Bradley, Gregory.Bradley@usm.edu, 228.214.5402; Dr. Faye Gilbert, Faye.Gilbert@usm.edu, 601-266-5544 Type of project: _x_Infrastructure __x_ Educational program __x___Research program __x_Workforce development __x_Economic development __x_ Eco-Restoration __x_ Seafood __x__Other (Name): Tourism Brief description of activities: The proposed building will house the College of Business on the USM Gulf Park campus and the Center for Coastal Analytics (CCA). Since Hurricane Katrina, the College of Business at USM Gulf Coast (CoBGC) has been housed in an inadequate modular structure. The CoBGC serves the educational needs of over 500 undergraduate and 100 MBA students each year. The CoBGC operation will include the new Center for Coastal Analytics (CCA), created for the purpose of conducting economic impact analyses, primary research projects, financial analyses, business assistance for entrepreneurial start-ups, and graduate education focused on two critical sectors of the Mississippi Gulf Coast economy: blue economy activities and Coastal tourism. The new building (and CCA) will be constructed on the Gulf Park campus of the University of Southern Mississippi and will unite and house the intellectual capital of the College of Business. The CCA will provide long-term economic impact analyses and primary research for the commercial seafood fisheries (i.e., shrimp, crab, oyster, spotted seatrout, red snapper), recreational fisheries and marine tourism, and Coastal tourism sectors unique to the Mississippi Gulf Coast (gaming, hotels and lodging, restaurants, sports tourism, ecotourism, creative economy tourism, culinary tourism, festivals and events unique to the area such as Cruisinâ€™ the Coast). The CCA will provide business plan assistance and training to support entrepreneurial activities. The CoBGC and the CCA will support the development of two unique graduate certificate programs in the country: marine economics and coastal tourism. These programs will train graduate students from the marine sciences and fisheries in the business analytics and strategies associated with Coastal marine activities; the certificate in coastal tourism will train graduate students and working professionals/executives in the business valuations of tourism sectors and new ventures. Location (City, County): Long Beach, Harrison County	Harrison	Yes	Yes	Yes	Yes	Yes	No	Yes	86	Yes		$ 35,000,000.00	$ -		
	Research and Education	4249	11/26/2014	Evaluating the Impact of Upland Land Use Land Cover Change on Water Quality of the Mississippi Sound Estuary	Objective: Develop a decision support tool to evaluate the impacts of upland land use land cover (LULC) change on coastal water quality and provide analytical tools to help select the most suitable areas for restoration and as sites for monitoring the progress of the restoration. Background: With the development of the gaming and tourist industry, Mississippi's Gulf coast has experienced rapid growth in population and economic activity in the past several years. The population of the coastal counties in Mississippi has been increasing and continues to increase, resulting in changes to the land use and the land cover on the coast and in the upland areas. According to new U.S. Census population estimates the Mississippi Gulf coast has three of the top 10 fastest growing cities in the state from 2012 to 2013. In response to this rapid growth in coastal population and economy, the Mississippi Department of Marine Resources (DMR), the lead agency for the State's Coastal Management Program, developed the Comprehensive Resource Management Plan (CRMP). The CRMP seeks to balance natural resource protection and economic development through cooperation among local, state, and federal agencies and the private sector. Land use/land cover and water quality are unequivocally linked. Change in the upland land use and/or land cover can impact water quality in the coastal areas. Coastal waters receive runoff from surrounding watersheds that drain these upland areas into the coastal estuary. Changes in the LULC of the upland portions of coastal watersheds can produce increased amounts of nutrients, sediment, and other pollutants. Proper understanding of these complex processes will result in better decisions and make the restore process more sustainable. This understanding will play an important role in coastal restoration by helping decision makers select the most suitable areas along the coast to restore and/or purchase and to model and monitor the effect of the restoration activity. The modeling part of the decision support tool will allow decision makers to ask; â€˜what ifâ€¦â€™ questions about a part of a watershed. Project Description: The proposed will develop a decision support system (DSS) (Figure 1) by integrating remote sensing and geospatial analysis with existing and validated numerical watershed models to analyze potential restoration decisions and provide possible outcome	Hancock, Stone,St Tammany ,Mobile,J ackson,Pe arl River,Was hington,H arrison,G eorge	Yes	No	No	No	No	Yes	No		No		$ 300,000.00	$ -	Evaluating and monitoring	
	Research and Education	4258	12/10/2014	Remediation of Oil Spills and Gas Releases by Biochar Activated at Low-Temperatures	I. Introduction Biochar has emerged as a promising sorbent for recovering or containment of marine crude oil spills (Nguyen and Pignatello, 2013). Biochars are porous, and has a bulk density lower than that of seawater so that biochar particles float on seawater. Biochars contain pores with hydrophobic internal surfaces that are wetted much faster by organic compounds rather than water (Gray et al., 2014). This difference is particularly noticeable when the biochar is produced from pyrolysis at low temperatures (e.g., 370Â°C). Thus, the spilled oil can effectively fill the pores of biochar particles while water cannot. Biochar can also adsorb the dissolved oil species and remediate the contaminated seawater. Biomass is abundant in the Gulf region and biochar is usually a byproduct in biofuel production. It is therefore relatively inexpensive compared to other synthetic absorbents. Moreover, the spent biochar can be burned directly along with the absorbed oil in controlled environments for energy production. That is, there is no need to separate the absorbed oil from the biochar for their end use, and the energies of both biochar and oil can be recovered. As results of these advantages, bioochar is likely a cost-effective absorbent for remediating spilled oil. II. Necessity for Activation and Newly discovered Method Absorption is a major technology for the remediation of spilled oil and contaminated water. Sorbentâ€™s absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbentâ€™s internal pore volume and surface area. Nguyen and Pignatello (2013) reported that biochar from hardwood has a lower absorption capacity than those of many synthetic absorbents. Thus, internal pore volume of biochar has to be increased. CO2 and water are usually used to burn a fraction of carbon in generating larger pore volume during activated carbon production. Such physical absorption usually employs a temperature in the range of 600â€“1200Â°C, signifying the energy intensity required for such activation process. Recently, the Sustainable Energy and Environment (SEE) group at the University of Mississippi (UM) developed a family of new methods for biochar activation that was conducted in the temperature range 65-70Â°C. The energy throughput for the activation is much lower than the traditional methods. SEE is able to achieve a 16-fold increase in internal surface area, from 12.9 to 1890 m2/g. This activation approach is simple and requires agents that are readily available everywhere. Moreover, SEEâ€™s low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biocharsâ€™ internal surfaces. Considering these benefits of energy consumption and those		Yes	Yes	No	Yes	Yes	Yes	No		Yes		$ 300,000.00	$ -	develope product and create industry in MS	
	Research and Education	4263	12/19/2014	Costal Workforce Development and Training	The Workforce GoTeam recommends developing a two-year marketing campaign focused on promoting workforce development and training in the three coastal counties of Hancock, Harrison and Jackson. The marketing campaign will help support the effort to develop and sustain a highly qualified workforce, as well as support the partnership efforts with the local school districts and high schools, Mississippi Gulf Coast Community College (MGCCC), Pearl River Community College (PRCC) and MDES WIN Job Center. The campaign will connect high school students, parents and the unemployed with the community college training programs and companies in need of a skilled workforce. Though informative, the campaign will concentrate on being persuasive in nature. It will focus on persuading residents in our target audiences that staying on the Mississippi Gulf Coast and taking a more immediate career path is not only acceptable, but also attainable. The benefits of being employed and remaining/living on the Mississippi Gulf Coast will also be touted in a visually and verbally compelling manner. A particular emphasis will be placed on high school students, their parents and their guidance counselors to convey the opportunities available through alternate education and training. The end result of the non-collegiate career path will be communicated by illustrating the promising future (highly competitive salary, job security, quality of life) these individuals face â€“ with the appropriate training. This effort will help level the playing field for college path and non-collegiate career path high school students, thus helping to decrease the dropout rate and increase the employment rate.		Yes	No	Yes	Yes	Yes	No	No		Yes		$ 2,000,000.00	$ -		

	Research and Education	4272	12/23/2014	Stennis International Airport Aerospace Academy	HCPHC and Pearl River Community College jointly proposed to establish an Aerospace Academy at Stennis International Airport. With the proliferation of aerospace development in the greater Hancock County region, Stennis International Airport is primed to serve as home for Mississippi's Aerospace Academy. The academy will train the next generation of aerospace workforce in Mississippi and create a tremendous competitive advantage for the stat's aerospace development efforts.	Hancock	Yes	No	No	No	Yes	No	Yes	100	Yes		$ 2,000,000.00	$ -		
	Research and Education	4276	12/27/2014	Mississippi Coastal Heritage Restoration, Education, & Preservation Trail	Funding is requested to establish the Mississippi Coastal Heritage Trail (MCHT), a 100+ mile multi-use pathway linking coastal communities from Grand Bay National Estuarine Research Reserve to NASAâ€™s Infinity Science Center. While increasing public understanding and providing public access to natural resource interpretive sites, waterways, islands, and forests, this Trail will also provide an opportunity to educate community members and visitors about the effects of the Deep Water Horizon Oil Spill on Gulf Coast communities. MCHT will serve as an educational tool to teach about the interaction between humans and the marine environment as well as offer recreational access to a pedestrian/bikeway stretching across the historic and culturally rich Mississippi Gulf Coast. The MCHT will serve as the backbone of the physical network of cultural, historical and natural places where residents and visitors alike can connect with these places. Heritage Trails Partnership of the Mississippi Gulf Coast (HTP), highly supported by the National Park Service, is working to reconnect residents and visitors to the coastal ecosystems that surround them through recreational trails and conservation education projects. HTP is creatively fostering connections to education and tourism growth through trails and greenways while safe guarding the quality of coastal destinations. HTP has rallied all communities along the Mississippi Gulf Coast in a dialogue about creating a network made up of blueways and greenways where one did not exist. HTPâ€™s diverse Board of Directors, including community leaders of conservation, business, planning and health organizations, now leads the effort to create the Mississippi Coastal Heritage Trail (MCHT), recognized by the U.S. Department of Interior through the Americaâ€™s Great Outdoors Initiative. HTP has become a vibrant instrument for information exchange and building of interagency trust, related to trail projects, for the benefit of all coastal communities.	Hancock, Harrison,Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	78	Yes		$ 25,775,000.00	$ -		
	Research and Education	4282	1/2/2015	Classrooms and dormitories for the Center for Marine Education & Research (CMER) in Mississippi.	INTRODUCTION: The Institute for Marine Mammal Studies (IMMS) is a non-profit 501 (c) (3) organization dedicated to marine education, conservation, and research of marine mammals and sea turtles in the northern Gulf of Mexico. It operates a premier, state-of-the-art Center for Marine Education and Research (CMER) in Gulfport, Mississippi. It is the only facility on the Mississippi Gulf Coast that has the capability and expertise to care for sick and injured marine mammals and sea turtles while providing opportunities for marine education and research. IMMS serves as a liaison between public and private entities interested in marine mammal science and has partnered with the University of Southern Mississippi, Jackson State University, Louisiana State University, University of South Alabama, and the Mississippi Department of Marine Resources (MSDMR) to fulfill the state and federal needs regarding marine education, research, and response to and care of stranded marine mammals and sea turtles. IMMS also played a central role in the response to the BP oil spill in the northern Gulf of Mexico. Information on the programs and activities of IMMS can be obtained from its web site: www.imms.org REQUEST: IMMS proposes to construct dormitories and additional classrooms at the CMER in order to enhance research and educational programs and activities. This would allow IMMS to better collaborate with graduate students and scientists from the U.S. and abroad by providing inexpensive accommodation. IMMS works with nearby Universities and would like to expand its collaborative efforts to include other Universities in Mississippi which are located up to six hours away. The proposed dormitories would allow students and researchers from these Universities to contribute to the research efforts that are being conducted by IMMS in conjunction with MSDMR. Furthermore, it would allow us to house high school students from all over the state for educational camps, fieldtrips, and overnight activities throughout the year. This would greatly extend the educational outreach that IMMS is currently able to provide to the Gulf Coast and the State of Mississippi. The proposed project will not only benefit IMMS. It will provide additional support for MSDMR and the State of Mississippi by enhancing marine education, research, conservation, and instilling the importance of good stewardship in future generations. IMMS currently has the land and the necessary infrastructure (e.g., roadways, utilities, etc.) in place to start the project.		Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ 5,000,000.00	$ -		
	Research and Education	4291	1/5/2015	MS Gulf Coast Work-Ready Community Program	Resilient communities, coastal preservation, conservation, preparedness, recovery and sustainability within any geographical region are dependent upon a strong economy and thus a highly qualified workforce. In turn, a highly qualified workforce depends upon comprehensive, coordinated, integrated and regional workforce training programs. Such workforce training programs must provide a range of skills development opportunities beginning with basic competency and employment levels and culminating with recognized credentials. To meet the workforce training program needs of the Mississippi Gulf Coast region (Harrison, Jackson and Hancock counties), the Mississippi Development Authority (MDA), in partnership with Mississippi Gulf Coast Community College (MGCCC) and Pearl River Community College (PRCC), proposes the Mississippi Gulf Coast Work-Ready Community Program. The goal of the program will be to cultivate a more highly qualified workforce on the Mississippi Gulf Coast by creating a new and innovative workforce training program within the three coastal counties. The Mississippi Gulf Coast Work-Ready Community program will be an open-entry, competency-based exit program. Open to all coastal citizens, the program will place emphasis on developmental skills training (math, reading, writing), employability skills training (interview skills, resume writing skills) and skills specific to local/regional industries. A credential that is specific to the local/regional area and its industries will be developed and offered to program participants. The program will be designed as a â€œpathways program.â€ The training program and resulting credential will position participants to undertake multiple pathways upon program exit. Participants may enter employment, may enter subsequent workforce training programs or may enter other educational programs such as, but not limited to, credit-based career and technical programs at either MGCCC or PRCC. The proposed project aligns well with Mississippi Works, an economic development initiative of the Governor of Mississippi and the workforce development goals of the GoCoast 2020 Commission. All agencies within the Mississippi workforce development structure will be sought as program partners in order to achieve the necessary and comprehensive coordination that will be required to sustain the program and insure successful employment of program participants. The program will be developed over a six-month time period and deployed in ongoing training sessions within the three coastal counties over a two-year period. Specific objectives and desired outcomes are as follows. Objective 1: Creation of an open-entry, competency-based exit training program. Activities will include working with MGCCC and	Harrison, Jackson, Hancock	Yes	No	Yes	No	Yes	No	No		Yes		$ 3,500,000.00	$ -	create new curriculum	
	Research and Education	4292	1/6/2015	Public/Private Training Partnership Program	The Mississippi Development Authority (MDA) proposes to establish a Public/Private Training Partnership Program to provide workforce training in Hancock, Harrison, and Jackson counties through state institutions of higher learning, community and junior colleges, and Workforce Investment Network job centers ("Training Providers"). Funds will be used to support high-impact workforce training partnerships between Training Providers and approved private companies, public entities, and not-for-profit organizations. The program will focus on college students and recent college graduates by providing internships and training opportunities with companies and organizations located in Hancock, Harrison, and Jackson counties. Workforce training under the program may include internship programs, occupational skills training, and educational training including workplace literacy, basic skills, and soft skills.	Harrison, Jackson, Hancock	Yes	No	Yes	No	Yes	No	No		Yes		$ 2,000,000.00	$ -		

	Research and Education	4298	1/8/2015	ONE COAST Scenic By-ways and Relocation Campaign	It is recommended that $2,019,250 in Restore Act Funds be utilized to launch a ONE COAST Scenic Byways and Relocation Campaign to drive tourism and real estate sales. A decade in the making, Beach Boulevard in Hancock County, is the only shoreline along the MS Gulf Coast that has received the designation as a Mississippi Scenic By-way. The vision for a scenic byway did not stop at the 13 miles of shoreline in Hancock County. The 30 miles in and around NASAâ€™s Stennis Space Center buffer zone, an untouched natural green space that can never be developed , is now part of the By-ways to Space. The buffer zone---a natural haven for birding, biking, fishing, camping and exploring---is not only a national asset for homeland security and defense, but also for the emerging new eco-tourism product of the Mississippi Gulf Coast. Work is underway now to connect the beach boulevard by-way to the rest of the Gulf Coast by naming Highway 90 in Harrison and Jackson counties as Scenic By-ways, to celebrate the 100th Year Anniversary of the Old Spanish Trail. During 2015, the by-way will extend into Harrison County up to Debuys Road. There is interest from Jackson County leaders to extend the by-way there and in Biloxi, segmentation may be required to carve out the Casino Districts. A Mississippi Scenic Byway designation can benefit a community in several interrelated ways: Resource protection; Community recognition as a source of pride; Economic development/tourism through visitor kiosks, vista spots to serve tourists; Community visioning to address roadway corridors and land use issues; Partnering by bringing individuals, land owners, the public and private sector to partner for betterment of the community; Access to federal and state grants, trusts, loans and assistance programs for safety improvements, facilities, improvements to access areas, protecting historical and cultural resources. The mission of the Mississippi Coastâ€™s two new scenic byways is to preserve, enhance, protect and promote the natural, historic and cultural tourism intrinsic values of 62 miles of scenic roadways for the enjoyment and education of the American public. The goal of the scenic by-ways programs is to introduce the Byways to Space and the Beach Boulevard Scenic Byways to the public by: -Taking advantage of the INFINITY Science Center, a Mississippi Tier I tourist attraction that opened in mid April 2012 that has a focus on the science of land, sea, and outer space.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes		$ 2,019,250.00	$ -		
	Research and Education	4299	1/9/2015	Mississippi Gulf Coast Business Resource Centers	Mississippi Gulf Coast Business Resource Centers Entrepreneurial support is one of the keys to positioning communities for economic success in tough times. With the economy struggling to get back on track following Katrina, the Gulf Oil Spill, Isaac and the recession, there was and still is a need to fuel the small business engine by giving entrepreneurs and companies the support they need to re-open their doors, recover, expand and hire more workers. When the Deep Horizon Oil Spill hit, the Hancock Chamber of Commerce was poised to launch the business resource recovery center, using the Katrina model as a template. In the aftermath of Hurricane Katrina, the Hancock Chamber of Commerce was on the ground immediately providing technical assistance to businesses. Through a Gulf Oil Spill Grant grant from the Economic Development Administration, the Hancock Chamber of Commerce together with the Hancock Community Development Foundation and the City of Bay St. Louis established a Regional Business Resource Recovery Center (BRRC) for the Mississippi Gulf Coast and managed the center from July 2011 â€" December 2013. In 2013, the Hancock Chamber was awarded the Community Economic Development Award for this program by the Mississippi Economic Development Council. The center has now become dormant due to lack of funding. Through this proposal, we recommend that a total budget of $8.4 million be allocated from the Restore Act Funds to fund a Mississippi Gulf Coast Business Resource Center Program. Using the Hancock Chamber Model, we propose to Develop a Small Business Task Force & Business Resource Center in each county, using existing Chambers of Commerce to bring all key stakeholders together to: Stabilize local businesses; ▪tabilize jobs and incomes for individuals; ▪tabilize community structures; ▪ebuild community, business and consumer confidence; ▪et targets and timelines; and, ▪dentify existing plans and resources.	Jackson, Hancock, Harrison Counties	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 8.40	$ -		
	Research and Education	4302	1/16/2015	Oil Spill Aftermath Asssesment on Asian American Communites	During the influx of Vietnamese refugees throughout the 1970s and 1980s, Vietnamese families migrated to the Mississippi Gulf Coast to work in the seafood industry. They started to work in Biloxi's seafood factories as oyster shuckers and shrimp packers. Some Vietnamese familiar to commercial fishing in Vietnam became successful as shrimp boat captains and deckhands. Now, Vietnamese fishermen make up almost half of the state's commercial fishermen in Mississippi. The Vietnamese American community's population increased to more than 8,000 from Census 2010. These include several towns like Pass Christian, Biloxi, Gulfport, D'Iberville, Ocean Springs, Gautier and Pascagoula. Majority Vietnamese households in the South Mississippi depend on the seafood industry, and 2,000 Vietnamese individuals are directly employed by the seafood industry as commercial fishermen, seafood factory workers and distributors. The BP oil spill had an extraordinary destabilizing effect on human communities in Mississippi particularly the lower three counties, Harrison, Jackson, and Hancock. The stress and strain is evident among the Asian Americans community financially, environmentally, culturally, socially, and psychologically. These communities are most dependent on commercial, subsistence, and recreational harvesting of natural resources 7 / 10 from the Gulf of Mexico, and thus were particularly vulnerable to the disruption caused by this disaster. The social fabric of our community is slowly falling apart following the spill. This impact comes mostly from uncertainty about the future, fear of food contamination, the chaos of the cleanup, lack of job opportunities, and the ongoing collapse of the seafood industry. In response, AAC took the frontline and started mobilizing Vietnamese fishermen on the Mississippi Gulf Coast. As the oil spill turned to an environmental and economic disaster, we came together to document the needs of our community and to advocate and establish the appropriate solutions. Asian Americans for Change would like to propose an oil spill aftermath community assessment on the Asian American community working and living in the lower 3 counties. Also included other minority community as well. Hancock, Harrison and Jackson county. The goal for a community assessment will beneficiary to many. Allowing a more accurate data collection and helping bridge the communication gap. Also allowing to pinpoint where the problems are in the community. Therefore, this will also allow Asian Americans for Change, local organizations, state organizations, national organizations, state agencies and federal agencies to accurately propose projects in problem areas and allow the correct resources to be accessible. It is important the methodology for assessing the community is not limited or restricted. Every approach will be taken into measure. Data and Interviews collected will be recorded and documented for further analysis. Approached participant must be		Yes	Yes	No	No	No	No	No		No		$ 90,700.00	$ -	Community interviews	

	Research and Education	4319	2/20/2015	Requirements Analysis and System Architecture Definition for an Operational Ocean Observation and Modeling System	The Gulf of Mexico living coastal and marine systems are experiencing stress from man-made disruptions including the Deepwater Horizon incident and natural phenomena, including severe storms, sea level rise, coastal depletion, hypoxia and compromised water quality. Decision makers have not been afforded with the actionable information and knowledge needed to make well informed decisions in interest of the public and the associated businesses and industries along the Mississippi Gulf Coast with regards to short and long term coastal management. Apparent in recent man-made and natural disasters is the inability to predict the effects of these events due to the lack of in-situ sensors, ability to assimilate data from all sources and modeling the effects of these events in a timely manner. Two prominent examples are the case of Deepwater Horizon, the ability to rapidly forecast the direction of the spill and Hurricane Katrina, the ability to accurately predict storm surge. Also, resulting from Deepwater Horizon was the need for baseline environmental conditions. In order to respond to these anthropogenic and natural disaster in both tactical and strategic time scales, is an operational center inclusive of comprehensive sensing, modeling and forecasting capability and the associated infrastructure along the Gulf of Mexico, specifically the Mississippi Gulf Coast, to adequately respond to these environmental conditions occurring at temporal scales from hours to decades and spatial scales from meters to kilometers. Proposed is to document requirements for a sustained operational center, from observations to decision products, and develop and end-end Concept of Operations (CONOPS) for MS RESPONSE. This would be based on requirements from all stakeholders to include, but not limited to, the Mississippi Department of Environmental Quality (DEQ), Department of Marine Resources (DMR) and other local, state, and federal. From an economic development perspective, â€œBlue Economyâ€this will include industry located on the Gulf Coast and outside will be interviewed to determine requirements for a test-bed that would attract industry to locate on the Mississippi Gulf Coast. Federal Agencies will be interviewed to determine their requirements, including test-bed and range requirements. This will include but not limited to Office of Naval Research (ONR), Commander, Naval Meteorology and Oceanography Command (CNMOC), Naval Oceanographic Office (NAVOCEANO) and National Oceanographic and Atmospheric Administration (NOAA). It is fully recognized this is not a complete list and once work is initiated many stakeholders will be added and interviewed. Based on all assimilated requirements a CONOPS for MS RESPONSE operational center will be developed. This will be an all-	Hancock, St Tammany ,Mobile,J ackson,H arrison,Ja ckson	Yes	No	No	No	Yes	No	No		Yes		$ 1,475.00	$ -	
	Research and Education	4330	6/1/2015	Fishing Industry Educational Outreach	The fishing industry along the Mississippi coast, commercial and recreational, is one of the largest contributors to the local economy, with nearly $250M in sales and representing 5550 jobs (2011 statistics). In general, quotas within the various State-regulated and Federally-regulated fisheries are antiquated, with the result of extremely conservative quotas. There is an effort by the Mississippi Department of Marine Resources (DMR) to update those quotas based on more scientific methods than used in the past. Once new quotas are in place, there is an opportunity to educate local fishermen on theses quotas and the reasons behind them. Increasing their understanding of the process and the results is expected to assist in adhering to new quotas and to establish a collaboration through which other scientific results can be communicated. The Mississippi Enterprise for Technology (MSET) was recently awarded a grant from the Small Business Administration (SBA) for a Marine Industries Science and Technology (MIST) cluster. The award was made under the SBAâ€™s Regional Innovation Cluster (RIC) program to assist in the growth of small businesses involved in marine science and technology (S&T) along the Gulf of Mexico coast. This proposal under the RESTORE Act would provide an educational outreach mechanism for the MIST cluster and DMR representatives to interact with the local commercial and recreational fishing industry. The main focus of this interaction would to educate the fishing industry on rules, regulations, and quotas, as well as how these were derived and how they will help support sustainable fisheries. In many cases, fishermen are only afforded the final results (quotas) for various areas. It is felt that more knowledge of the processes and the results will provide a better understanding of the established quotas and how they support sustainability. The team for this proposed project is MSET personnel in conjunction with DMR personnel. The project plan is to create a series of meetings convening members of the fishing industry. In the first year, three meetings in each of the three coastal Mississippi counties are planned. The first will be an introductory meeting explaining some of the existing rules, regulations, and quotas and the reasons behind them. Feedback will be accepted on the most pressing issues associated with quotas, or perhaps other aspects of the industry. Meetings two and three will address questions posed in the first meeting, present updates on quota assessments, and present other pertinent information to the industry.	Hancock	Yes	Yes	Yes	Yes	No	No	No		No		$ 70,000.00	$ -	
	Research and Education	4348	4/13/2015	Lady Fab Trio (travel, higher education, and health management)	The â€œNHR Blueprint Foundationâ€ is a 501c3 non-profit organization working to address the specific needs and problems associated with young women. Established in 2013 in Diamondhead, MS, with the business office in Gulfport, MS, our mission is to aid our community in launching eradication of disparities amongst women. We aim to emphasize encouraging young women to stay in school, pursue entrepreneurship and travel, and be fabulous! Our goal is to encourage young women to pursue broader horizons in career and travel, including obtaining passports, dressing for success, higher education, health management, and free enterprise. Our vision is to spearhead a generation of young ladies more cognizant of opportunity, healthy living, and the benefits of versatile travel. We hope to connect with every community from the Gulf Coast to Jackson to encourage the attitude â€œdonâ€™t view me as a princess, see me as President!â€! In staying keeping with our goals of travel, higher education, and health management, the Lady Fab Trio encompasses three programs: Operation Worldly Girl, Heart Beat to the Beat, and Medical Room Ready. â€œOperation Worldly Girl (OWG)â€ is a program that will assist high school female juniors and seniors in receiving passports and acquiring knowledge of foreign opportunities, and bring that experience back to benefit the state of Mississippi. We will contract with the local passport office to have staff on site to process selected young ladies. The event will embody guest speakers that will introduce ladies to study abroad opportunities, internships, summer and senior trips. Though the initial phase will only promote travel to the Caribbean and Canada, the goal is for OWG to become an annual program that will enlist representatives that will provide young ladies with opportunities in Europe and Asia. OWG will offer many fun and informative programs catering to young women. This includes guest speakers, workshops, games, international foods luncheon, dress for success make-overs, demonstrations, and many other activities. We will provide accommodations for our guest speakers, honorarium, certificate of completion for the young ladies, passport photo taken onsite, and processing of passports. This program will be offered free to local high school juniors and seniors, with prequalification/selection prior to the event. OWG, with food and activities for young ladies of the Gulf Coast Region, will allow us to put on a program educating girls on disparities, self-esteem, diversity, and entrepreneurship. â€œHeart Beat to the Beatâ€(HB2B) is a cardio dance workshop seeking to identify past attitudes and behaviors regarding exercise and diet in mothers and their daughters. We will seek to identify historical aspects of family exercise and meal planning		Yes	No	No	No	Yes	No	No		Yes		$ 750,000.00	$ -	

	Research and Education	4359	4/29/2015	Moored Observations in the Mississippi Bight: Environmental Monitoring System	The Central Gulf of Mexico Ocean Observing System (CenGOOS) was implemented in order to address a gap in operational ocean observations on the continental shelf in the central Gulf of Mexico. This is a very dynamic region where riverine input, dominated by the Mississippi River but also influenced by other rivers such as those discharged through Mobile Bay, has a major influence on oceanographic processes. Seasonal hypoxia has occurred since at least the 1950â€™s (Brunner et al., 2006), and it was observed in each of the 5 years of a project headed by the PI and funded by the Northern Gulf Institute. In December of 2004 CenGOOS began operations when a 3 m discus buoy, with satellite data telemetry, was deployed at a location south of Horn Island near the 20 m isobath. This buoy was damaged during hurricane Katrina in August 2005, but despite being dragged by strong waves and currents over a path of some 15 km, the buoy survived the storm and provided crucial information on winds and waves (Bender et al., 2010a,b; Howden et al., 2007). This was a striking example of the value of high frequency, real-time data that a mooring can provide. Recently the elements of a seafloor package have been ordered that will give monitoring information on the seafloor temperature, salinity and dissolved oxygen, which will be acoustically telemetered to the buoy, greatly enhancing the observing system. The two 3-m discus buoy systems (they are rotated in and out) are aging and no funds have been able to be acquired to modernize their data logging and telemetry systems. Despite the value of this observing system, funding pressures have decreased the operating budget for the buoy and there is some danger of losing funding altogether. The purpose of this project is to modernize the buoy systems and fully fund the operation and maintenance of the buoy and its components, to continue to operate the buoy to provide scientists and decision makers with real-time data that can be used to address a range of questions. Buoy data can be used to inform scientists and marine resource managers what surface meteorological conditions are like, how strong and in what direction currents are flowing, when hypoxia has begun to form, how long hypoxia lasts, is the coastal ocean being affected by ocean acidification, as well as a helping to answer whole host of other questions. Collaboration with other projects will add to overall understanding. Mississippi coastal resource managers (e.g., DEQ and DMR) will be surveyed to see if information products can be tailored to meet their needs. The location of the buoy mooring is at 34.0423N, 88.6473W. The seafloor mooring will be placed at the edge of the watch circle of the mooring chain. The Central Gulf of Mexico Ocean Observing System buoy system will be modernized, missing instrument inventory will be replaced, and a second seafloor mooring will be purchased to rotate with the first. This will ensure the continuation of high quality data.		Yes	Yes	No	Yes	No	Yes	Yes	15	Yes		$ 340,380.00	$ -	
	Research and Education	4367	5/19/2015	Restoration Plan for the Henderson Point Property	This restoration plan has two components. First, the terrestrial portion of the property will be restored to its historic, natural use by removing concrete and miscellaneous debris from the property. Invasive species will be removed, and an invasive species management plan will be implemented. This will allow native vegetation to infiltrate and grow on the property. The second component is to stabilize the shoreline and reduce shoreline erosion through the construction of several breakwaters along the western shore of the property. These breakwater structures will be constructed with recycled concrete removed from the property. They will also create habitat for oysters, crabs, and fish.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 600,000.00	$ -	
	Research and Education	5371	6/25/2015	Visitor and Artist Education Retreat	The project will create an experience for visitors and students to study artists and the inspiration that comes from the natural landscapes of the Gulf Coast. This includes providing a setting and accommodations for artists and visitors to experience the landscape of the Gulf Coast, restoring the natural landscapes that have been damaged by the most significant natural disaster in the U.S. and other calamities, restoring and creating physical components of the cultural landscape that enhance comprehension of the influence of climate and ecology, providing educational opportunities about natural landscapes and cultural resources, and providing access to natural landscapes and cultural resources to artists, visitors and students. Gulf Coast landscapes serving as inspiration for the programs will be the maritime Live oak forest, the beach landscape the Schooner Pier Complex, and Deer Island. The maritime forest area east of the Ohr-O'Keefe Museum of Art will be evaluated for health and structural stability. Damaged and unstable trees will be repaired. The beach landscape east of the Schooner Pier to the Biloxi Bay Chamber of Commerce will be restored to its natural condition through the establishment of sand dunes, intermittent salt marshes, and open beach areas. The erosion of Deer Island will be stopped and land mass regenerated. Erosion protection and accretion of sand and building of land mass at Deer Island will be accomplished by the restoration of the oyster reefs on the north side of the island. The establishment of breakwaters and salt marshes for sand accretion on the south side of the island will protect the existing beach and enhance land mass regeneration through the restoration of salt marshes. The Live oak and oak groves on the island will be evaluated, invasive trees will be removed, and the remaining trees will be managed for best health. The old roadway down the center of the island will be repaired and made suitable for visitor access. Additional tree species will be planted on the island to provide biodiversity in the forests and to establish varied habitats for the islandâ€™s animals. An island management plan will be implemented to accommodate visitors walking through the landscape. Eight wooden skiffs and ten catboats will provide a cultural experience for artists and visitors. Storage will be built to house the boats in a location that will provide safe and easy access to the Schooner Pier Complex launch areas. Educational experiences will be supported with screen art studios both on Deer Island and along the edges of the maritime forest across from Deer Island. The island studios will be within the Live oak groves, at oyster point, within the old slash pine forest, at the Grand Bayou tidal stream, and along the edge of the vast black needle rush marshes and will be of a tear-away nature that can be reassembled after tropical storms. Two boats equipped as art studios with drawing boards will provide island access and views to the island landscapes, the mainland development, and bridges. These boats will also provide access to the Back Bay and Davis Bayou in Ocean Springs. Four 12-passenger vans and two 30-passenger buses will provide trips to study art and artists along the Gulf Coast and New Orleans, as well as boat building facilities and repair yards on the Back Bay of Biloxi.	Harrison	Yes	No	No	Yes	No	Yes	Yes	10	Yes		$ 11,000,000.00	$ -	
	Research and Education	5378	7/7/2015	Intelligent Communities: Helping rural communities transition to, plan for, and prosper in the digital age	The Mississippi State University Extension Intelligent Community Institute helps rural communities transition to, plan for, and prosper in the digital age. The Institute, in partnership with local champions, schedules a series of presentations to increase awareness of what the implications of the digital age are for rural communities. The next step is the community completing a checklist that will serve as a benchmark and plan to move forward. The Institute coordinates resources to address the needs identified in the checklist report. For example, helping communities with their online presence, deploying or enhancing robotics to help with their knowledge workforce, increasing telehealth awareness, providing digital literacy workshops, etc. The ultimate objective is to help rural communities become intelligent. An intelligent community is one that understands the challenges of the digital age and takes conscious steps to prosper in it. If funded, this proposal will target both coastal communities as well as more rural communities to the north and help them transition to the digital age. This goes hand in hand with Governor Bryant's plan to increase broadband connectivity on the coast. Broadband connectivity is but one component that needs to be coupled with education and awareness to better use the technology. The Intelligent Community Outreach achieves precisely that.		Yes	No	Yes	No	Yes	No	No		Yes		$ 150,000.00	$ -	
	Research and Education	5380	7/13/2015	Reef Fish Barotrauma Reduction, Education and Outreach Program	Reef fish such as snapper, grouper, amberjack and sometimes red drum caught in waters deeper than 30 feet can suffer from barotrauma. Restrictive seasons, creel limits and size limits are forcing the release of reef fish and untargeted species caught by anglers out of season. Bartrauma reduction devices allow the fish to be returned back to the depth from which it was caught without puncturing the skin or swim bladder. Research facilities and anglers in the Gulf have been experimenting with the use of barotrauma reduction devices recently and have determined they are an effective way to return fish to the depth from which they were caught and increase survival rates. Increasing survival rates can possibly lead to more consistent recreational seasons and help improve stock sizes. An education and outreach initiative should be coordinated by the Mississippi Department of Marine Resources along with other appropriate state agencies and research institutions as well as conservation and industry groups such as the Coastal Conservation Association and American Sportfishing Association and local retailers. Printed materials, videos and workshops should be targeted towards anglers and charter captains and efforts should be made to provide reduction devices to anglers and captains.		Yes	Yes	No	Yes	No	Yes	No		No		$ 1.00	$ -	

	Research and Education	5388	8/30/2015	Developing Grassroots Ideas for the Purpose of Building a Sustainable Economic Engine by Finding Innovative Ways of Restoring Gulf Coast Industry and Reinvesting in Existing and New Business Development	Executive Summary The proposed plan outlines a multi-faceted approach to developing a Community-based High Technology Laboratory capable of producing an â€œEconomic Engineâ€ resulting in innovative approaches to developing for-profit businesses and industry, future products to capture retail trends, and innovations in green technologies in order to produce sustained economic and community development in targeted impoverished regions. The Coastal cities and Counties sit at the epicenter of the slowest recovery from the effects of natural disasters and economic and community development in the State of Mississippi. Hancock, Harrison, Jackson Counties in Mississippi are parts of the coastal Region which severely suffers from challenges in business development, economic disparities, poor school systems and inadequate predictable measures for warning evacuees and responders during disaster events. A multi-faceted approach capable of maximizing existing resources while creating an effective â€œEconomic Engineâ€ is needed to stimulate job creation in the targeted region. This engine has to be strong enough to â€œdriveâ€ a consistent level of development while creating tools that will produce short-term, mid-term and long-term results. The Transocean and BP settlements can be effective â€œDriversâ€ in order to have create the flexibility to assess outcomes and effectively change course to achieve set objectives capable of sustaining effective economic growth. We believe the goal in the Coastal region should be to create a viable, productive and growing economy capable of maximizing its rich assets. The Living Word High Technology Renewable Energy and Business Development Incubator (HTREBDI) can be the catalyst needed utilizing SBS Laboratories to effectively â€œdriveâ€ economic and community development in the Coastal region.	George,Jackson,Stone,Hancock,Pearl River,Mobile,St Tammany	Yes	Yes	Yes	Yes	Yes	Yes	Yes	25	Yes		$ 10.00	$ -		
	Research and Education	5422	10/6/2015	Coordinated Strategy for Sea Turtle Recovery in the Gulf	NFWF and its partners, including managers from all five Gulf States, USFWS, NOAA, and NPS, as well as NGOs and science institutions, propose to restore Gulf populations of sea turtles through the following 3 strategies. This work builds on $3.8M in previous investments NFWF has made to bolster Gulf sea turtle populations since June 2010. 1) Bycatch Reduction - This two-part strategy is projected to save the reproductive equivalent of a minimum of 3,000 nesting females over five years: a) NFWF will provide free vouchers for 7,000 Turtle Excluder Devices (TEDs) to LA and AL fishermen to cover 100% of this fishery, and work with state managers to offer training and assistance on TED installation, and inspections and usability follow-up testing. b) NFWF will convene state and federal agents to standardize enforcement, data collection and reporting processes to create a Gulf-wide database; invest in the capacity of states to enforce the use of TEDs; and evaluate the results of increased enforcement. 2) Nesting Beach Restoration - This three-part strategy is projected to save the reproductive equivalent of 2,400 nesting females over five years: a) Predator Control: NFWF will establish a fund to invest $100,000 annually in predation reduction efforts on high density nesting beaches in FL and AL to maintain predation levels at or below 30% in perpetuity. b) Light Pollution Reduction: NFWF and the Sea Turtle Conservancy (STC) will minimize light pollution on 600 of the highest priority public and private properties along high density nesting beaches, and train county code enforcement staff to address lighting problems. c) Habitat Protection: NFWF and USFWS will protect 2.5 miles of priority nesting habitat (1,300 nests annually) within Archie Carr and Hobe Sound NWRs. NFWF, STC and U of FL will also pilot a new conservation easement to [strengthen protection of] existing nesting habitat on developed properties. 3) Critical Gaps in Science/Management - NFWF will mobilize scientists to address two critical research gaps that impact turtle recovery efforts: a) coordination of a 5-year study to identify priority habitats in the Gulf and to identify overlaying threats; and b) a pilot program to test new methods for turtle-friendly beach nourishment.		Yes	No	No	No	No	Yes	No		No		$ 58,600,000.00	$ -		
	Research and Education	5460	12/24/2015	National Diabetes and Obesity Research Institute	On December 24, 2015, the National Diabetes and Obesity Research Center and Tradition-Medical City submitted Project #5460 to the RESTORE Project Portal. The information below is an update to Project #5460 based on a recent study and updated design and building estimates. The National Diabetes and Obesity Research Institute (NDORI), a Mississippi (MS) non-profit 501 (c)(3) corporation, is an innovative, translational research institute focused on the population-based study and treatment of diabetes and obesity, currently in its infancy. The singular focus of NDORI is to find a cure for diabetes - a disease that impacts more than 15% of MS's population. NDORI is located at Tradition, a 4,800-acre master-planned community in Harrison County at the intersection of Highway 67 and Highway 605 north of Biloxi and Gulfport. NDORI represents a unique opportunity to invest in the long-term health of the state, position the MS Gulf Coast as a regional leader in the growing health and life-sciences industry, create a catalyst for exponential economic growth, and promote community stability through development and investment. The concept would be one of the cornerstones of a healthcare, bioscience cluster: the Tradition Medical City. In spring 2018, Southern MS Planning and Development District (SMPDD) commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern MS to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; the final product of this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippi." Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development, and a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for future growth of NDORI and Tradition based on the success of other existing healthcare clusters at Lake Nona, FL, and the Research Triangle Park in NC. Based on these findings, NDORI and Tradition will make the MS Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the state and region. NDORI is strategically located in MS and serves as a natural laboratory positioned to address the effects of diabetes and obesity at the epicenter of incidence. The result of the investment in diminishing health disparities will have far-reaching impact in reducing health-related costs of Mississippians and	George, Harrison, Forrest, Pearl River, Jackson, Mobile, St Tammany, Stone, Hancock	Yes	No	Yes	Yes	Yes	No	Yes	81	Yes		$ 57,000,000.00	$ -		
	Research and Education	5465	2/16/2016	Computerized RESTORE	Developing Working Proposals to hire University Researchers and Marketers to address the RESTORE act and present the proposal 100% into dimensional sections for fundamental learners comprehensive training and developmental studies in progress. Each University Researcher that provide a biographical sketch, resume, CV etc. will be assessed to his or hers RESTORE ACT decision making teams. There will be implementation of US Military and International interventions and redesign ROTC Workforce Innovation Training and Development.		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 18,000,000.00	$ -		
	Research and Education	5466	3/2/2016	Long Beach Handicapped and Wounded Warrior Baseball Complex	This project consists of the development of a baseball complex designed specifically for handicapped and Wounded Warrior persons. There will be three Miracle League Fields, one concession stand, two parking areas and a signed and landscaped entrance. The total cost of the project will be approximately $2 million. 3 fields @ $500,000 each $1,500,000 1 Concession Stand $ 150,000 2 Parking Areas $ 200,000 Signed and Lanscaped Entrances $ 100,000 GRAND TOTAL $1,950,000 The project will be located on publicly owned land at the existing site of the Long Beach Senior Center and baseball park.	Harrison	Yes	No	No	Yes	No	No	No		No		$ 2,000,000.00	$ -		

	Research and Education	5488	6/15/2016	Pearl River stream flow monitoring	The lower Pearl River system is a rich and diverse ecological system that is home to a variety of aquatic and terrestrial species, including several on the endangered species list such as the Gulf Sturgeon. The hydrologic system is a braided system of major and minor channels and it is heavily influenced by several man-made structures including a canal with two low-water sills and three lock systems on the west Pearl River, and a low-water weir on the east Pearl River, all of which have altered the natural flow characteristics of the system. Most of the flow comes from the Pearl River itself, which drains more than 6,700 square miles above Bogalusa, LA. Additional inflows from the East and West Hobolochitto Rivers in Mississippi and Bogue Chitto in Louisiana contribute some flows. Heavy precipitation events in the coastal region of these tributaries can be primary contributors to the flow in the region. In these instances, the hydrologic flow models generally used for forecasting are not nearly as accurate since they are developed with flows from the Pearl River being the major contributor. The transfer of ownership and possible removal of the canal, locks, and sills are the subject of ongoing discussions between federal, state, and local agencies. Some hydrologic and biologic data are currently being collected in the system, but none of those currently being collected integrates the cumulative streamflow of the system. Additionally, data are not currently being aggregated and housed in one central location to facilitate ease of access. Furthermore, little to no comprehensive background data, streamflow or water quality, exist to document changes to either flow patterns, suspended-sediment transport, or water quality of the area. The purpose of this project is to collect water level, velocity, and instantaneous discharge data and use these data to compute the flows from the Pearl River at U.S. Highway 90 in Hancock County, MS. Instrumentation will be installed on the bridges over the east and west Pearl River channels to collect stage and velocity data to compute the instantaneous discharge in the channels. Discrete stream flow measurements will be collected at the 5 bridges on the lower Pearl to determine the flow distribution between the channels. The computed discharge data will be filtered using a tidal filter to compute the daily flows in the river at the U.S. Highway 90 crossing. Additionally, stage and velocity data will be collected at the CSX Railroad bridge crossing at the mouth of the river to compute the flows through that channel to augment the collection of water quality data at that location. These data will allow the impact of the flows from the tidal fluctuations on the distribution of the headwater flows to be analyzed. The cost to obtain the equipment needed for the collection of time-series data at two locations, and add a velocity sensor at the third, is $75,000. Data will be collected for 5 years, at $70,000 per year, which will allow for the data to be	St Tammany ,Hancock, Orleans	Yes	Yes	No	No	No	Yes	Yes	20	No		$ 425,000.00	$ -		
	Research and Education	5490	6/24/2016	Land Acquisition for expansion of Grand Bay National Wildlife Refuge and National Estuarine Research Reserve	This effort seeks to permanently protect lands identified by the U. S. Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management by the Grand Bay National Wildlife Refuge (NWR) and Grand Bay National Estuarine Research Reserve (NERR). This project will add approximately 1,686 acres to the nearly 18,000 acres currently owned by the U.S. Fish and Wildlife Service and the State of Mississippi. It will add critical coastal lands to the Grand Bay NWR/ NERR for permanent protection, and improved management of coastal wetlands, and adjacent upland areas. The Grand Bay NWR/NERR protect one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The targeted 1,686 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt pannes, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay Refuge/ NERR include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of the Grand Bay NWR/NERR will also expand public recreational access, research, education, and training opportunities in this unique coastal environment. The Conservation Fund has initiated due diligence with financial assistance from the Knobloch Family Foundation, is in discussions with the landowner regarding acquisition of these tracts, and anticipates that the project could be completed immediately, pending availability of funds.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 2,000,000.00	$ -		
	Research and Education	5505	8/11/2016	Gulf Coast Institute for Minority Leadership in Natural Resources	The Deepwater Horizon Oil Spill caused lasting ecological and socio-economic impacts in Gulf of Mexico (GM) and adjacent land resources. Efforts have been initiated to restore impacted ecosystems. Such restoration efforts will be long-term and itâ€™s imperative that a well-trained cadre of biologists with leadership skills exists to ensure that such restoration efforts continue, are consistent, ensure multiagency cooperation, and fulfill long-term goals. Itâ€™s imperative that demographics of these leaders are consistent with coastal constituencies. However, demographics of individuals in leadership roles in natural resources donâ€™t reflect the citizenry of Gulf Coastal States, nor even the U.S. The population of counties bordering GM was 12,523,710 individuals, representing 20.1% of population of the 5 Coastal States. Of these >12 million citizens, 42.6% are minorities, with 17.4% Black, 0.6% Native Peoples, 2.7% Asian, and 20% Hispanic/Latino. Natural resources in coastal counties adjacent to GM are critically important socio-economically and ecologically. Many state and federal agencies are charged with conserving these resources and itâ€™s imperative that those with leadership roles of these agencies reflect the citizenry who need these resources. Itâ€™s not sufficient to simply recruit minority leaders from universities. Their unique skills must be identified and nurtured during their B.S. education. There also exists many young professionals employed by federal and state agencies, who are candidates for leadership roles, and would benefit greatly from advanced training in leadership. Most of these professionals likely graduated from a traditional natural resources B.S. program. These programs emphasize organisms and habitats, and do not allow those select individuals to express and build on inherent leadership skills. Itâ€™s regrettable that most B.S. programs in natural resources in the U.S. emphasize animal and habitat management principles, with less focus on developing leadership skills. However, there is always a subset of individuals who display skills in leadership such as being presidents of professional organizations. The organismal and habitat emphases of university curricula often do not allow these â€œfuture leadersâ€to develop and build their inherent leadership skills. Individuals displaying these unique skills must be identified and â€œnurturedâ€. Mission Statement: Identify and train a subset of highly motivated professionals within natural resource management agencies and undergraduate students representing the 4 key minority groups within the Gulf Coastal States to understand federal and state government operations, federal and state policy development, administration, media interaction, advanced public		Yes	No	No	No	Yes	No	No		No		$ 15,662,208.00	$ -		

	Research and Education	5519	11/13/2016	EFFECT OF ANTHROPOGENIC NOISE ON THE HABITAT USE AND BEHAVIOR OF MARINE MAMMALS AND SEA TURTLES IN MISSISSIPPI WATERS	Lead Institution: Mississippi State University (MSU), Mississippi State, MS Collaborating Institutions: Institute for Marine Mammal Studies (IMMS), Gulfport, MS Naval Research laboratory (NRL), John C. Stennis Space Center, MS Project Duration: 5 years Project Cost: $2,000,000 per year (MSU: $1,100,000 per year; IMMS & NRL: $900,000 per year) INTRODUCTION: The interaction between anthropogenic (resulting from human activity) sound, marine mammals, and other species has been identified as a key subject both by the Marine Board-European Science Foundation (ESF) and the US National Science Foundation (NSF). While there are no laws or regulations that specifically address the effects of anthropogenic noise on marine life, there are pieces of legislation (e.g., the Marine Mammal Protection Act and the Endangered Species Act) that provide avenues for approaching the issue. Human-generated noise has recently become a concern for the National Oceanic and Atmospheric Administrationâ€™s (NOAA) National Marine Sanctuary Program and has been an ongoing issue outlined in a study conducted by the Ocean Studies Board of the National Academies of Science and Engineering. The Mississippi Gulf Coast (MGC) is home to a thriving oil and gas industry, recreational and commercial fisheries, commercial shipping, and military exercises. Still, all of these activities are known to produce anthropogenic sound into the aquatic environment, possibly impacting marine life (Romano et al., 2004; Samuel et al., 2005; Tyack, 2009). Currently, the extent of the impact of sound produced by these industries on bottlenose dolphins (Tursiops truncatus) and Kempâ€™s ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound is unknown. The effects of anthropogenic noise on marine mammals are diverse could include hearing loss, alterations in feeding patterns, breeding behavior, and changes in migration patterns (Environmental Investigation Agency, 1998). Anthropogenic sound can also cause masking and threshold shifts in marine mammal hearing. Masking is defined as the level the sound must reach	Harrison,Jackson,Hancock,StTammany	Yes	No	No	No	No	No	No		No		$ 10,000,000.00	$ -	
	Research and Education	5524	12/9/2016	Provide Daily Ocean-Weather reports to local news channel and Harbor Masters along the Mississippi coast.	a) The project will provide daily graphic display of Ocean and atmospheric conditions in the Mississippi sound and shelf to the local harbor masters and coastal managers and the public. Ocean-weather includes winds, ocean currents, water quality and clarity (diverâ€™s visibility), ocean temperature, water turbidity, and additional ocean conditions at a spatial and temporal resolution not presently available on a daily time schedual. Visual products from these data would be provided from now-cast oceanographic models and satellite imagery on daily bases that can be made public through the University of Southern Mississippi (USM) Ocean Weather Laboratory. Harbor Masters require daily updates to the local ocean conditions so that ships operations can be performed accurately and safely. This capability will enhance the coastal operations for safety and commercial applications and support the growth of port activity along the coast. b) Our local coastal community will be provided with local ocean-weather conditions for the Mississippi coastal waters to support commercial utilities such as fisheries, recreational boating, beach conditions, water clarity and turbidity plumes swimming and diving purposes. Ocean-weather products will be a major extension of the local weather conditions reported on the television news. Conditions will be reported daily on websites and sent to daily television news. The public will be informed of local ocean conditions, so they can take advantage of present research capability at USM. Public awareness of ocean conditions will increase ocean activities along the Mississippi coastal waters. This capability will provide both improved safety on ocean conditions and improve occupation and activities on our coastlines. Areas for recreation fishing, boating, diving etc, will be improved. Local water quality will be reported to the Mississippi Department of Environmental Quality and Department of Marine Resources, so they can inform the news and public about water safety conditions along the coast. Unsafe conditions could be related to public safety for beach users and fisherman include harmful algal blooms or contaminated waters. The Ocean Weather Laboratory at the USM will assemble satellite products and model products to provide a unique capability for visualization of ocean activity in the Mississippi Sound, Shelf and offshore waters. These ocean-weather conditions will provide the public a new capability for monitoring and overseeing our coast and provide improved safety and public health response and management operations. These ocean weather data can be used to support the coast guard for tracking movement of debris and support search and rescue in the Miss sound and shelf.	Hancock, St Tammany,Mobile,Jackson,Pearl River,Harrison	Yes	No	Yes	Yes	No	Yes	Yes	10	No		$ 200,000.00	$ -	
	Research and Education	5551	5/3/2017	Pollinator Health for Food, Wildlife and People- Public and Private Lands Environmental Education	Pollinator Health in Urban and Rural Communities Pollinator health is about our social and economic impacts and how all citizens can play a role in its success. Many times research on environmental projects do not have the opportunity to be applied on the ground in a variety of venues with nontraditional audiences. So, if research does impact citizens of all walks, it can result in a greater success rate for the mission and when data and knowledge is disseminated in a unique way it supports fulfilling its true potential or establish greater span of those impacted by the benefits. This project puts research, education, BMPs, technology and education in the hands of local citizens and community leaders that can make a difference on their properties, their community public lands and specialty crop farmers. Most local citizens do not have a clue how pollinator health impacts the quality and production of their food. The MUFC network provides a very hands-on opportunity to determine if citizens in these audiences can gain a better understanding of the role they play in pollinator health, the practices they can implement and why itâ€™s important. MUFC has many years of using research data and applying it to our cities and towns and the citizens living in and near these communities. The ultimate challenge of any research is applying that research on the ground, providing sound technology transfer, demonstrating best management practices and supporting the mission through creative partnership and collaborations. We will work through our municipal partners to conduct the workshops and implement the pollinator sites. Currently, MUFC has 97 communities in our Bloom Town Mississippi program with every community on the coast included. All of these are willing to host a pollinator health sites. Other local partners will include local community leaders, civic groups and private producers and land owners to install 12 demonstration sites and provide a series of outreach and education venues. Through this project we will partner with the groups we currently in our network and even new collaborators to include: workshops, hands on implementation of planting, social networking, local press, newsletters, web site, and large data base contacts. Contacts in the project include industry partners, mayors, city leaders, civic groups, chambers, parks and recreation professional, arborist, forester, landscape architects and citizens. Proposed metrics include multiple sources of information as outline in detail in the pre-proposal. Any data, surveys, charts, photo journal or other information generated as a result of this project will be public information and available for FAR or other research to use as needed.	George,Harrison,Washington,Perry,Forrest,Pearl River,Jackson,Mobile,StTammany,Stone,Hancock	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ 110,000.00	#######	

	Research and Education	5566	6/21/2017	Presence, Potential Sources, Behavior and Fate of Endocrine Disrupting Chemicals in Northern Gulf of Mexico Estuarine Systems	NOAA Project ID# 12881: This project will conduct the first detailed sediment, surface water, suspended organic matter, and sediment pore water assessment of northern Gulf of Mexico estuarine systems to identify the presence, potential sources, and physicochemical mechanisms controlling the behavior and fate of complex mixtures of known or suspected endocrine disrupting chemicals (EDCs) in these systems. EDCs are natural or synthetic compounds which, even at trace exposure levels, can alter early development in vertebrates and invertebrates and cause serious effects later in life or even in successive generations. Known or suspected EDCs include many compounds used in or produced during oil and gas exploration/production; some of the more recalcitrant compounds associated with raw crude oil are known/suspected EDCs. EDCs can easily pass into ecological systems and are often persistent; moreover, the consequences of exposure are markedly different from how we usually think of exposure to environmental contaminants. At the levels found in natural systems, EDCs do not destroy cells or attack DNA. Rather, they target a developing organismâ€™s chemical messengers (hormones) and the messaging network (endocrine system). Organisms living in estuaries are particularly vulnerable to the effects of EDCs, mainly because estuaries are natural sinks for contaminants transitioning from terrestrial to marine ecosystems. Estuaries are among the most productive biomes on earth; nearly 50% of the worldâ€™s population lives or works in close proximity to estuaries. Consequently, estuaries are under increasing threat from both natural and anthropogenic stressors (including EDCs). Little is known about the types, behavior, and ultimate fate of the vast number of potential EDCs entering estuaries, although it is known that some EDCs are present in these systems and that some estuarine organisms show signs of EDC exposure. Very few field-based studies have considered EDC behavior and fate in estuaries. Of these, most have considered a limited number of sampling locations, a single sampling event, or both. Moreover, most did not consider mixtures of EDCs likely to be encountered in estuaries, nor were their methods of chemical analysis capable of detecting or quantifying EDCs at trace levels. Also, none considered sediment pore water as a partitioning phase, and none attempted to quantitatively link EDC partitioning behavior to spatiotemporal distributions of multiple EDCs within real estuarine systems. The proposed project will significantly advance our abilities to detect and quantitate mixtures of EDCs at trace concentrations in complex estuarine samples and will provide the first quantitative mechanistic evidence linking the behavior of EDC mixtures (transport and partitioning) to their fate (spatiotemporal accumulation, sequestration, and resuspension) as a function of dynamic estuary system conditions (hydrodynamics, water quality parameters, physicochemical conditions of partitioning phases). The results of this project will provide the first detailed, data-driven assessment of the scope of EDC contamination in northern Gulf of Mexico estuarine systems, provide a basis for examining ecological and human risks posed by EDCs in these ecosystems, and inform potential		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	#######	
	Research and Education	5578	6/22/2017	Anthropogenic and Biological soundscape assessment of the Mississippi Sound using passive acoustics	NOAA Project ID#13023: Passive acoustics is a very versatile tool in studying both anthropogenic (boat traffic, dredging, etc.) and biological (fish, marine mammal, invertebrate) sound sources. Long term recorders can be deployed with oceanographic sensors for up to several months at various locations within the MS Sound to assess the presence, temporal and spatial distribution, and interactions of both types of sound sources while also monitoring basic oceanographic properties such as temperature, salinity, and light. Post-recording detection algorithm analyses can identify soniferous fish and invertebrate species, as well as marine mammals, inhabiting the coastal waters of Mississippi in order to provide more information on temporal or spatial habitat range variability. Some soniferous fishes in Mississippi waters are also an important commercial stock. Assessing their distribution and potential changes in temporal or spatial habitat usage can directly affect management and restoration decisions. Marine mammals specifically are a sentinel species, reflecting the overall health of the coastal ecosystem, and were greatly affected by the oil spill. Being able to manage impacts to their survival or habitat are vital to the health of the Gulf of Mexico. Documenting overlap of oceanographic water properties (i.e., river outflow characteristics) and marine mammal distribution offers another piece of missing information about the impact of freshwater outflow on dolphin distribution and habitat range. Date Entered: May 3, 2017	Harrison, Hancock, Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 60,000.00	$ -	
	Research and Education	5579	6/22/2017	Model open-ocean marine mammal habitats to guide their protection and conservation	NOAA Project ID#13010: Detailed scientific data are lacking for many species of offshore marine mammals in the Gulf of Mexico, so restoration activities will require an incremental approach including initial data collection and monitoring, that will vary by species and stock. To identify priority threats there is an additional need for population monitoring, and spatial habitat definition. Population assessment, monitoring and habitat characterization is needed for offshore marine mammal populations due to the substantial gaps in our understanding of these difficult to study species. The detailed offshore distribution of most offshore marine mammal species is poorly understood. A better understanding of offshore marine mammal prey dynamics is also needed. To address these limitations, all existing data on offshore marine mammals will be used to construct models of their distribution and habitat. These models will be refined and validated by targeted data collection. Additional data collection may involve visual, acoustic, tagging and other methods. Areas of overlap between critical marine mammal habitat and potential injury from anthropogenic activities will be selected as the focus for zones of study. Population monitoring and habitat modeling are further required to assess the effectiveness of restoration strategies. Date Entered: May 2, 2017 Date Edited: May 3, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	#######	
	Research and Education	5582	6/22/2017	Reduce vessel collisions with marine mammals	NOAA Project ID#13007: This project will restore open-ocean marine mammals by reducing their collisions with vessels in the Gulf of Mexico. A program will be developed to understand the nature of marine mammal and vessel collisions and strategies to avoid them. Use of passive acoustic data, predictive modeling, and animal tagging data will inform better understanding of the causes of ship strikes and their threats to each population of marine mammals. A collaborative partnership with NOAA and the shipping industry will be developed to assess changes in vessel routing that could reduce the risk of marine mammal and vessel collisions and/or voluntary speed restrictions that would help reduce the probability of vessel collisions. Recreational boater education and awareness will be another issue addressed by this project. Brydeâ€™s whales (Balaenoptera edeni) are the only resident baleen whale species in the Gulf of Mexico (GoMx), where they are extremely rare, and have a distribution restricted to the eastern Gulf of Mexico. Vessel collisions may be a major factor in their restricted distribution and small population size. Tagging data suggest that these whales have shallow nocturnal diving patterns with 88% of their nighttime spent near the surface within the draught depths of most large commercial vessels. Better understanding of how to protect Bryde's whales from vessel collisions will be one goal of this project. Date Entered: May 2, 2017 Date Edited: May 3, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	#######	
	Research and Education	5583	6/22/2017	Reduce impacts of anthropogenic noise on marine mammals	NOAA Project ID#13022: The goal of this project is to identify the sources of ocean noise and map their relative influence as stressors of offshore marine mammals, and to propose means for noise mitigation. Ocean noise in the GOM has reached the highest levels measured at any open-ocean location, owing to anthropogenic noise from commercial activities related to oil exploration and production and commercial shipping. Calibrated passive acoustic monitoring data will be used to characterize the spectral, temporal, and spatial distribution of anthropogenic noise throughout the GOM and determine areas of overlap between high noise levels and marine mammal habitat. Long-term passive acoustic data have been collected throughout shelf, slope, and deep-ocean waters. These data will be used to make geospatial models of noise distribution and their overlap with marine mammal habitat. In addition, the source levels of individual noise sources (seismic airguns, commercial ships, oil platforms) will be measured to provide model input. Collaborative partnerships (NMFS, NOAA Sanctuaries, NGOs) will be developed to identify, test, and implement strategies to reduce noise impacts from sources of commercial shipping, and seismic exploration and extraction noise, with priority for noise reduction in areas of overlap between high noise levels and high animals densities. Date Entered: May 3, 2017 Date Edited: May 4, 2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -	
	Research and Education	5584	6/22/2017	Reduce Marine Mammal Bycatch in Commercial Fishing Gear	NOAA Project ID#13033: Bycatch in fishery gear is a leading source of mortality for marine mammals; however annual mortality of marine mammals in the Gulf of Mexico from fisheries bycatch is not well understood. Gulf of Mexico fisheries with known or potential marine mammal bycatch include: pelagic longline, shrimp trawl, gillnet and purse seine. Bycatch in fishery gear will be addressed as a collaborative project with NOAA and the fishing industry. Offshore Gulf of Mexico stocks that are known to be impacted include spotted dolphins, as well as shelf and three stocks of coastal bottlenose dolphins. Expanded and enhanced fisheries observer coverage will be supported and better understanding of the circumstances that lead to cetacean bycatch will be obtained. A strategy will be developed to address marine mammal bycatch in commercial fisheries, including potential modifications to fishing hardware and methods. Date Entered: May 4, 2017 Date Edited: May 4, 2017		Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -	

	Research and Education	5585	6/22/2017	Passive Acoustic Monitoring for Open-Ocean Marine Mammal Restoration in the Gulf of Mexico	NOAA Project ID#13034: An array of five passive acoustic monitoring recorders have been deployed continuously since 2010 in the Gulf of Mexico, in response to the Deepwater Horizon oil spill. These instruments allow monitoring of marine mammal populations for a variety of species (e.g. sperm whales, beaked whales, delphinids, Brydeâ€™s whales). Our proposed project would extend the temporal sampling and expand the spatial coverage of passive acoustic monitoring to include the entire GOM, to allow monitoring for marine mammal restoration efforts including habitat modeling and the study of impact assessment from anthropogenic noise and vessel collisions. Current long-term Passive Acoustic Monitoring (PAM) efforts in the Gulf of Mexico consist of five sites that were designed for damage assessment following the Deepwater Horizon oil spill. These sites have been operating continuously since summer 2010, and are collecting data using High-frequency Acoustic Recording Packages (HARPs). The High-frequency Acoustic Recording Package is uniquely capable of collecting continuous broadband acoustic data suitable for marine mammal density estimation for the full range of species. No other autonomous acoustic monitoring hardware is available that can match the HARPâ€™s capabilities for bandwidth and deployment duration. Likewise, the Scripps Institution of Oceanography has unique capabilities for collecting, processing and analyzing large acoustic data sets for marine mammal calls. Our project partners, University of St Andrews Centre for Research into Ecological and Environmental Modeling (CREEM), have world-leading capabilities for providing density estimates from long-term passive acoustic monitoring datasets. Together, we have been working with NMFS SEFSC to use these density estimates as part of a habitat model, integrating both visual and acoustic data into the final model. Our vision for this project is to create a passive acoustic monitoring network that includes sensor coverage for the entire US Gulf of Mexico. The rationale for this plan is to allow robust estimates of marine mammal populations, sufficient spatial coverage for habitat modeling, and detailed models of soundscape including both broadband and directional information. Density estimation using passive acoustic data requires supplementary information on animal sound production rates (cue rate), source levels and behavior. We have been working to develop density estimates for deep diving cetaceans, delphinids, and Brydeâ€™s whales in the Gulf of Mexico. As a component of the overall project, we propose to collect data on animal diving and vocal behavior using suction-cup attached acoustic recording tags, in addition to constructing acoustic tracking arrays at selected monitoring sites. These data will provide the supplementary information (detection distance, call production rates) needed to expand the range of species that are amenable to density estimation. Date Entered: May 5,2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -		
	Research and Education	5588	6/23/2017	Migratory Species Studies	NOAA Project ID#12967: Expand Gulf of Mexico Migratory Species Pathways Mapping and Conservation Project with emphasis on migratory connectivity modeling, threats assessment, and the identification of habitat restoration needs including pelagic habitat. a. Objectives: Understand the most significant migratory pathways of fish, Sea Turtles, Marine Mammals, and birds in the Gulf of Mexico large marine ecosystem, and the habitats that their populations need to continue being viable; identify the most important threats to those pathways and habitats. b. Species group/habitat: Fish and Water Column Invertebrates, Sea Turtles, Marine Mammals. c. Description: Migratory species rely on multiple habitats to complete their life cycles. This project should: i. Assess the threats to species while migrating (along their pathways) in the Gulf of Mexico ii. Develop an optimized habitat portfolio using GIS and migratory connectivity models that identify the essential habitats to maintain migratory species populations throughout their life cycle and to guide habitat restoration and protection. iii. Support technological advancements in the development of biological tracking and oceanographic monitoring networks, such as acoustic monitoring networks, gliders including the development of migratory movement tracking networks and infrastructure across the Gulf. To do that it should fund: current or new establishment of scientific and management networks of practitioners assessing the movements of marine organisms (e.g., iTAG network of acoustic telemetry) and synthesis of a collaborative strategy for a Gulf of Mexico Animal Tracking Network. The project continues work previously completed and published by The Nature Conservancy to map the migration routes of 26 bird, fish, marine mammal and turtle species in the Gulf of Mexico (Brenner et al. 2016). We believe that this research revealed the great importance of species migration to the Gulf ecosystem as well as the importance of continuing to com pile and analyze migratory pathways as an important decision-making tool for Gulf restoration. This project would accomplish the next phase of this work with particular emphasis on threat assessment and identification of the most critical migratory pathways for protection for their habitats. (Brenner, J., C. Voight, and D. Mehlman, 2016 Migratory Species in the Gulf of Mexico Large Marine Ecoystem: Pathways, Threats, and Conservation. The Nature Conservancy, Arlington, VA. 93 pp.) Date Entered:April 26, 2017 Date Edited:May 7, 2017		Yes	No	No	No	No	Yes	No		No		$ 1,200,000.00	#######		
	Research and Education	5591	6/23/2017	Centralized Database for Marine Turtle Flipper and PIT Tags	NOAA Project ID#13055: Objectives: - Maintain the Cooperative Marine Turtle Tagging Program (CMTTP) - Initiate and maintain an online comprehensive inventory of PIT tags Many programs supporting the management and conservation of sea turtle populations in the Gulf of Mexico and northwest Atlantic waters rely on tagging sea turtles with flipper tags and/or PIT (passive integrated transponder) tags. These tagging efforts are worthless if recovered tags cannot be matched with data from the original tagger. Almost all flipper tags in the Gulf of Mexico and northwest Atlantic waters are issued through the Cooperative Marine Turtle Tagging Program (CMTTP), which was established by the National Marine Fisheries Service (NMFS) to provide a centralized tag database for management purposes (NMFS reserves the right to access the CMTTP database) and to prevent loss of data and duplication of identification codes. In April 1999, the management of the CMTTP was transferred from the Miami Laboratory of the Southeast Fisheries Science Center to the Archie Carr Center for Sea Turtle Research (ACCSTR) at the University of Florida. In recent years, 127 organizations have received flipper tags from the CMTTP. About 10,000 tags are distributed each year. For example, 13,750 flipper tags and 82 tag applicators were distributed in 2016. All flipper tags have a University of Florida return address. The centralized flipper tag database now has 139,680 entries. The use of PIT tags is increasing because of their extremely low loss rate (approaching zero) compared with loss of flipper tags. However, coordinating data from PIT tags is a greater challenge than flipper tags because PIT tags, unlike flipper tags, do not carry a return address and are not distributed in numerical sequence. An online comprehensive inventory of PIT tags is needed so that if a turtle with a PIT tag is found, the group that tagged the turtle can be identified and data exchanged. When PIT tag data are submitted to the CMTTP, they are entered into a PIT tag database. That database now has 55,640 entries, but this is a fraction of the PIT tags inserted into turtles. There is still a need for a PIT tag database that lists all PIT tag codes with the contact information for the tag originators. The CMTTP is the contact for unscrambling encrypted PIT tags within NMFS. We are submitting this idea proposal to maintain the Cooperative Marine Turtle Tagging program and to initiate and maintain an online comprehensive inventory of PIT tags. We have submitted a 3 year estimated budget. Date Entered: May 10, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 624,030.00	#######		
	Research and Education	5593	6/23/2017	Assessing the Human Dimensions of Marine Mammal Management	NOAA Project ID#13065: In the wake of the widespread environmental and ecological destruction caused by the BP oil spill, there can be no higher priority than ensuring the health and well-being of marine mammals, fish, and other wildlife populations from this point forward. Just as these populations are monitored and managed according to the use of proper science and the best available data, so too should the human dimensions of marine mammal management (i.e., how humans interact with species, awareness of proper behavior around marine wildlife, knowledge of laws to prevent problematic interactions, etc.) be assessed methodically and scientifically. Human dimensions data collection can be accomplished through the use of focus groups and scientific, probability-based surveys, which are effective and commonly used tools for gauging the human dimensions component of resource management. It is recommended that NOAA and other resource agencies avail themselves of these methods in order to develop and evaluate communications, campaign messages, and outreach strategies designed to curb harmful interactions with marine wildlife. Ongoing human dimensions data collection can reveal trends in attitudes and opinions and identify gaps in knowledge and awareness -- such data are critical to understanding the effectiveness and impact of communications, messages, and outreach strategies, ensuring the wise allocation of funds and resources. Date Entered: May 10, 2017		Yes	No	No	No	No	No	No		No		$ 150,000.00	$ -		

	Research and Education	5594	6/23/2017	Montioring Brydeâ€™s whales in near real time from autonomous platforms to reduce anthropogenic threats	NOAA Project ID#13063: The Gulf of Mexico is home to a resident population of Brydeâ€™s whales that currently numbers less than 40 individuals and is being considered for listing as an endangered species. Gulf of Mexico Brydeâ€™s whales are subject to a number of anthropogenic threats, including ship strikes and the adverse effects of oil and oil dispersant exposure during oil spills. Effective mitigation of these threats will require a better understanding of their distribution in the northeastern Gulf of Mexico, and a means to assess their occurrence in near real time. The Woods Hole Oceanographic Institution (WHOI) has developed technology to detect, classify, and report the sounds of marine mammals in near real time from a variety of autonomous platforms, including Slocum gliders, wave gliders, and moored buoys (Baumgartner and Mussoline 2011, Baumgartner et al. 2013, Baumgartner et al. 2014). Since 2012, this technology has been used extensively on the U.S. and Canadian east coasts and in the U.S. Arctic to monitor and study marine mammals. Recent evaluations suggest that analyst-verified detections from this system are nearly 100% correct when estimating the presence of baleen whales in near real time. Detection data are immediately available on the publically accessible robots4whales.whoi.edu website, as well as by text, email, and tweet (@Robots4Whales). WHOI and NOAA are working closely with the U.S. Coast Guard to distribute these data via the Whale Alert app (www.whalealert.org), Coast Guard CG1View software, and AIS so that mariners have access to whale presence information. The objectives of the proposed project are to (1) demonstrate and evaluate near real-time detection of Brydeâ€™s whales from mobile autonomous platforms and (2) characterize the distribution and habitat of Gulf of Mexico Brydeâ€™s whales using acoustic detections from these platforms. The project seeks to use Slocum and/or wave gliders equipped with the WHOI-built near real-time acoustic monitoring system to survey the outer shelf and continental slope (100-2000 m) of the northeastern Gulf of Mexico during 2018-2019. Two surveys will be conducted per year, with each survey lasting 3-4 months. In addition to detecting Brydeâ€™s whales in near real-time, broadband audio will be recorded continuously from the vehicles to facilitate detection of other species after platform recovery. Detection data will be manually verified in near real time and distributed to the public and numerous stakeholders (including scientists, federal and state protected resource managers, Coast Guard, and the shipping industry) via robots4whales.whoi.edu, text, email, Twitter, and the Whale Alert app. After recovery of a vehicle, the recorded audio will be manually reviewed for Brydeâ€™s whale calls, and the results of this review will be compared to the detections made in near real time to determine the accuracy of the near real-time occurrence estimates. Additionally, associations between Brydeâ€™s whale acoustic detections and observations of remotely sensed sea surface temperature, surface chlorophyll, depth, and depth gradient will be statistically examined to characterize the speciesâ€™ habitat in the northeastern Gulf of Mexico. If of interest, the WHOI system can be expanded to include near real-time detection of		Yes	No	No	No	No	Yes	Yes		No		$ 750,000.00	$ -		
	Research and Education	5597	6/23/2017	The complete picture using high resolution digital imagery	NOAA Project ID#13084: High resolution digital Imagery has the ability to fill data gaps and research needs in a wide variety of subject areas in a very quick and efficient way. In the past 9 months, 3 surveys have been carried out in the New York offshore planning area, an area covering 43,000 km2. Two of those surveys have complete datasets georeferenced and partially available to view through a publicly available web portal (https://remote.normandeau.com/nys_public_data.php). Information in the public view includes locations of over 15,000 birds, their flight height and direction of travel when flying, and locations and direction of travel of over 2000 marine mammals, 600 turtles, 1000 large bony fish, 900 cartilaginous fish, and nearly 7000 fish shoals. All are mapped and information is available to be filtered by species, making it possible to associate species presence with sea depth and other important covariates. Jelly fish are visible in the imagery, and also collected and mapped are images of boating traffic. In the fall survey, active gill net, trawler, commercial shell fishing, and recreational vessels were identified and mapped. Although these are not available in the public view, they contribute a key piece of the puzzle of what is where and why. These kinds of data are exactly what are needed in the Gulf of Mexico, to form a complete picture of how the Gulf is being used. Data collected now can be used to monitor the future success or failure of the many projects that are currently targeted to improve the overall health of the ecosystem and maintain and increase the diversity and density of animals using the Gulf of Mexico. This is the basis of this project idea. A BOEM study completed in 2013 (https://www.boem.gov/ESPIS/5/5272.pdf) found that turtle densities were under-recorded by between 4x and 10x when data were collected by visual methods using low altitude aircraft or boats. Primary reasons for this were repulsion from the survey vessel (i.e. the animals dived), and opacity of the water column from an oblique view (boat observers canâ€™t see down). The behavior of marine mammals is also influenced by vessel traffic. The same study found that estimated densities of dolphins were potentially inflated by attraction to the boat survey vessel. The camera technology available today provides massive megapixel sensors and allows for ultra high resolution, revolutionizing imagery as an efficient data collection method. The recent New York study is identifying over 90% of birds to species, and even finding flight heights for around 70% of flying birds (https://remote.normandeau.com/docs/NYSERDA%20Fall%202016_Taxonomic%20Analysis%20Summary%20Report.pdf). Marine mammal and turtle identifications are also high, with success influenced primarily by subsurface depth obscuring important diagnostic features of similar species (i.e. beaked whales). It takes 9 days to collect data across the New York offshore planning area (https://remote.normandeau.com/nys_overview.php). Vast areas of the Gulf of Mexico could have essential, very detailed data collected very quickly and efficiently. The use of high altitude (1360 feet) and high resolution (1.5 cm or better) allows detailed surveys to be provided across state and federal borders, with results highlighting patterns across the entire Gulf		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -		
	Research and Education	5598	6/23/2017	Stock assessment development to inform Gulf Sturgeon population status and trends as a baseline to measure PDARP actions	NOAA Project ID#13076: The Gulf of Mexico Sturgeon Acipenser oxyrinchus desotoi â€œGulf sturgeonâ€ was federally listed under the US Endangered Species Act in 1991 by NOAA and USFWS (56FR 49653). Current management units for Gulf sturgeon include seven river systems and adjacent marine habitats across the northern Gulf of Mexico. Based on PDARP review (section 5.5.7) large numbers of Gulf sturgeon were exposed to Deepwater Horizon oil, and these fish were affected by exposure. Section 5.5.7.1 of the PDARP states that to address impacts to sturgeon, restoration goals will focus on improving access to spawning areas and increasing reproductive success of Gulf sturgeon. The 2009 Gulf Sturgeon Stock Assessment completed by W. Pine and S. Martell (see https://goo.gl/RAJAH2) with funding from NOAA & USFWS was the first effort to synthesize available Gulf sturgeon population data to determine stock status and trends. We propose to update this stock assessment to re-evaluate stock status of Gulf Sturgeon following recent events that could affect sturgeon populations including hurricanes, extreme droughts, and the Deepwater Horizon oil spill. This update will include data collected as part of the NRDA response monitoring to provide a baseline of Gulf sturgeon stock status and trend in each of the seven rivers. Phase 1 (cost ~$82000): This assessment will be useful for (1) prioritizing river systems in which to direct restoration efforts to reduce risk of population jeopardy, (2) providing baseline information from which to measure Gulf Sturgeon population responses to restoration actions or future perturbations such as oil spills or hurricanes, (3) meet Gulf Sturgeon Recovery Plan goals to use population models to inform restoration and management options. Phase 2 (cost ~$260000): We will develop an electronic data entry and management system to facilitate data collection, improve data accuracy and archiving, and increase data sharing opportunities among members of the Gulf sturgeon working gro up. These tools will increase data accuracy and reduce handling time making analyses more accurate and time efficient. This will enhance feedback loops between evaluating Gulf Sturgeon population responses to restoration actions under the PDARP while meeting DOI guidelines for best data management practices. Date Entered: May 11, 2017 Date Edited: May 12, 2017		Yes	No	No	No	No	No	No		No		$ 340,000.00	#######		
	Research and Education	5611	6/23/2017	An acoustic stranding alert system for the Gulf Coast	NOAA Project ID#13064: Marine mammal strandings occur regularly in the Gulf of Mexico, but stranding rates increased substantially after the Deep Water Horizon (DWH) oil spill. Post-DWH, stranded odontocetes (toothed whales and dolphins) were in poor health and often presented with adrenal and lung disease, consistent with exposure to DWH petroleum products (Schwacke et al. 2014, Venn-Watson et al. 2015). Restoration of odontocete populations in the Gulf of Mexico could significantly benefit from an improved response to strandings. The Woods Hole Oceanographic Institution (WHOI) is developing an odontocete stranding alert system based on the digital acoustic monitoring (DMON) instrument that detects, classifies, and reports the sounds of marine mammals in real time (Baumgartner and Mussoline 2011, Baumgartner et al. 2013, 2014). WHOIâ€™s DMON instrument has been implemented in acoustically quiet moored buoys, which have been used successfully since 2015 to detect the presence of baleen whales in near real time (see robots4whales.whoi.edu for current buoy locations). The system is now being adapted to detect the whistles of odontocetes, and with NOAA Sea Grant support (proposal pending), an odontocete acoustic detection buoy will be tested in Wellfleet (Cape Cod), Massachusetts during 2018 as an early warning system for stranding events. A near-complete Sea Grant-funded WHOI study is demonstrating that whistles recorded just outside of Wellfleet Harbor occur reliably prior to mass strandings. Using advance warning from a near real-time acoustic detection system, animal rescue teams can significantly decrease response times and improve health outcomes by either (1) preventing animals from stranding (i.e., herding back to sea) or (2) ministering more quickly to recently beached animals. The objective of this proposal is to field, test and evaluate two odontocete stranding alert systems on the Gulf Coast. Exact locations of the proposed systems are to be determined in consultation with local stranding networks, but known or recent stranding hotspots (e.g., Hog Island, near Everglades City, FL) are likely candidates. Near real-time detection information from the buoys will be manually reviewed, and odontocete presence information will be publically accessible at robots4whales.whoi.edu. Stranding networks and the NOAA Southeast Regional stranding coordinator and staff will be alerted to the presence of odontocetes automatically by text message and email immediately after detection. Members of the stranding network will evaluate the efficacy of the early warning system by comparing outcomes before and after installation of the acoustic monitoring buoys. References: Baumgartner, M.F. and S.E. Mussoline. 2011. A generalized baleen whale call detection and classification system. Journal of the Acoustical Society of America 129:2889-2902. Baumgartner, M.F., D.M. Fratantoni, T.P. Hurst, M.W. Brown, T.V.N. Cole, S.M. Van Parijs, and M. Johnson. 2013. Real-time reporting of baleen whale passive acoustic detections from ocean gliders. Journal of the Acoustical Society of America 134:1814-1823. Baumgartner, M.F., K.M. Stafford, P. Winsor, H. Statscewich, and D.M. Fratantoni. 2014. Glider-based passive acoustic monitoring in the Arctic.		Yes	No	No	No	No	Yes	No		No		$ 900,000.00	$ -		

	Research and Education	5621	7/3/2017	Long term acoustic monitoring of colonial waterbirds and shorebirds	NOAA Project ID#13225: Colonial waterbirds, including several listed species and species of local and regional concern, nest in large colonies along the shorelines and islands of the entire Gulf coast. These colonies are typically established within proximity to good foraging sites in suitable nesting substrate (trees, shrubs, ground) that are not excessively disturbed and provide protection from, or absence of, predators. Threats to these colonies include human disturbance, overcrowding, nesting habitat degradation, and depredation. Changes in water levels and water chemistry due to climate change presents and additional consideration when managing and protecting colonies. Colony collapse can occur if foraging sites collapse which is often tied directly to water levels at critical rearing stages. Water levels can also affect colony access by humans and by predators. Typical surveys are expensive due to the human resource needs and aerial survey needs. While these surveys are necessary, they provide snapshots of colony activity and do not provide accurate timing of events over long (decades) monitoring periods. Particularly in light of climate change, slight changes in the timing of nesting and fledgling could have profound population effects over the long term. Acoustic monitoring of colonies provides a cost-effective, continuous (24 h) record of all colony activities. Acoustic cues can pinpoint episodic events such as colony predators (not all of which occur during observable, daylight hours) and natural or human disturbance; or it can provide timing information on arrival, colony establishment, chick feeding, and abandonment. Additionally, there have been several studies that have demonstrated that colony abundance can be correlated to acoustic activity. We recommend establishing a long term acoustic monitoring program in each of the Gulf states that will supplement ongoing surveys to better establish strong correlations between traditional survey methods and acoustic methods. The program can be modified as necessary to include additional colonies, areas that are under-surveyed, or areas that are part of a restoration program. A minimum of four colonies (two tree/shrub nesting and two ground nesting) in each Gulf state will be instrumented with 1 to 3 (depending on colony size) autonomous acoustic recorders prior to nesting season. Recording will be continuous until collection after nesting season. At least four sites will be equipped with iPAMâ„¢ software such that near real-time data will be sent to a web-based user portal where events can be monitored. Acoustic data will be processed for ambient sound levels, spectral content, episodic acoustic events over the average ambient levels and vocal behavior. Environmental data, survey data, and acoustic data will be analyzed for correlations specific to nesting success or failure at each site and as a whole along the Gulf Coast. We propose an initial 5-year, 5-state, 20-site program. This long term approach provides for continuous monitoring and increases sampling effort during nesting seasons throughout the Gulf Coast. Date Entered: may 15, 2017	Escambia, Hillsborough, Charlotte, Lee, Collier, Monroe, Mobile, Baldwin, Hancock, Harrison, Jackson, Cameron, Terrebonne, Lafourche, Plaquemines, Kenedy, San Patricio, Aransas, Calhoune, Refugio, Chambers,	Yes	No	No	No	No	Yes	Yes		No		$ 580,000.00	$ -	
	Research and Education	5622	7/3/2017	Acoustic diversity assessment of offshore sand shoal habitat utilization by fishes and invertebrates and the consequences of its use in nearshore restoration using sand placement	NOAA Project ID# 13232: Much of the sand used for projects are sourced from finite, natural sand shoals in the OCS. Sand shoal habitat has been identified as potentially important fish and invertebrate habitat, and as such, BOEM and other federal agencies have invested in extensive baseline ecological studies of several sand shoal sources. Acoustic tagging, trawling, camera surveys and other traditional survey methods, while highly valuable, provide only periodic or episodic information on the species or habitat (Harris et al. 2016). Passive acoustic monitoring has proven to be a successful, cost-effective method of monitoring vocal species and enhancing the long-term understanding of species and habitat use (Roundtree 2006; Zimmer 2011). However, acoustic surveys and acoustic habitat characterization have focused on species presence/absence and ambient sound level characterization rather than the assessment of the ecosystem as whole (Pijanowski et al. 2011). Through this more holistic perspective, ecologists can assess how ecosystems, and their concomitant acoustic signatures, change due to disturbance. Objectives: This study seeks to further develop and apply acoustic diversity indices as a tool to monitor the long-term baseline and recovery of offshore sand sources where acoustic activity and variability can be correlatedâ€"at a statistically significant levelâ€" with marine ecosystem health. Therefore, a logical next step in developing goals in soundscape management is to adapt and apply novel tools for assessing acoustic biodiversity within existing data collection initiatives. This proposed study will deliver novel, adapted analytical tools that provide an assessment of acoustic diversity in local and regional soundscapes to enhance the ability to detect changes in marine sand shoal ecosystems. Methods: Data will be collected through the deployment of sensor arrays across selected sand shoal ecosystems, specifically along human-disturbance gradients. To establish how shoal soundsca pes vary across space, time, and disturbance, a suite of over three-dozen soundscape metrics will be applied to the acoustic dataset. The utility of each of these metrics and the determination of optimal monitoring schemes will be established by validating the results with traditional metrics, and through several short-term deployments with a progressive assessment of acoustic parameters, timing and level of detail from metrics, for identifying the key indices in that ecosystem. The strongest metrics will provide researchers and natural resource managers with critical information about animal activity, ecosystem dynamics, and disturbance impacts. Development of these monitoring regimes for selected ecosystems will provide a standardized assessment method and monitoring tool that can be applicable across BOEM MMP regions. This is a critical consideration because marine-based projects often suffer from comparatively high access costs. Date Entered: May 15, 2017	Harrison, Jackson	Yes	No	No	No	No	Yes	Yes		No		$ 1,500,000.00	$ -	
	Research and Education	5625	7/6/2017	Improved and/or Expanded Assessments of Trans-Boundary Marine Mammal Stocks	NOAA Project ID#13240: Many marine mammal stocks that occur in U.S. waters also range or migrate into international waters of Mexico, Cuba, and the Caribbean. Assessing trans-boundary marine mammal stocks is particularly challenging because they can be distributed widely and be taken (disturbed, injured, or killed) by fisheries, energy development, vessel strikes, and/or other human activities throughout their range. Assessment of total abundance for such stocks can require substantial survey capacity, and assessment of fishery interactions and other types of takes of such stocks requires the exchange of information with foreign or international organizations and/or governmental agencies. Complete assessment of trans-boundary stocks that were injured as a result of the Deepwater Horizon spill is essential for their recovery and restoration. Priority should be given to those stocks that are endangered or threatened, hunted, or known to interact significantly with fisheries or other human activities in international or foreign waters. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5630	7/6/2017	Regional training for standardized marine mammal and sea turtle data collection and reporting	NOAA Project ID# 13229: Marine mammals, sea turtles, fish, and invertebrates can be affected by episodic and chronic events stemming from natural cause (e.g. hurricanes), human-related causes (e.g oil spills, ocean noise, fishing, marine debris), and combinations of the two (e.g. sea level rise, ocean acidification, erosion of protective wetlands). In all cases, in order to accurately assess the type and amplitude of any stressor, monitoring and data collection must take place over the long term. However, often the data collected on marine species is highly dependent upon the context in which that data were collected. This often leaves potentially significant data out of critical analyses when data were not collected in way that maximizes use and utility across projects; or results in missed opportunities to collect supplementary data. There are several databases available and used for government, university and private surveys, the most notable being the OBIS system. While data centralization is critical for maximum use and access, equally important, is data collection standardization that includes training. This project will assess the past, present and future data collection requirements for marine mammals, sea turtles, sea birds, and whale sharks in the Gulf of Mexico. The main focus will be science- and mitigation-based surveys that are either designed for scientific data collection through surveys for one or more of the select species groups (e.g. NMFS/BOEM stock surveys and University research); or are considered platforms of opportunity for specific industry purposes that could benefit from improved scientific data collection (e.g. seismic mitigation, dredging observation, fisheries observers, Navy observers). The project will create minimum Gulf-wide data collection standards for visual, passive acoustic, and photographic data collection that will be designed to be included, as recommendations, in all activity permits. A comprehensive, on-line data collection training prog ram will be developed with user credentials and expectations established over progressive modules. Specific modules for training spill-related personnel will be developed. From here, data acquisition â€œapps â€ such as SeaScribe will be enhanced to capture the larger data collection opportunities in â€œcitizen scienceâ€ programs or bridge watch programs, but still based on a robust data standard. The benefits from this project is that it establishes data standards that can be cross-referenced throughout the Gulf of Mexico regardless of the project. Standardized data collection, including metadata, will allow States can better coordinate management and assessment of wide-ranging species. While the data will still provide the project-specific information needed, a minimum standard will maximize the utility and sharing of that data. States can better coordinate management and assessment of wide-ranging species. The basis of the project will be a working group made up of researchers, governmental, and industry personnel involved in assessing or managing the species groups in the Gulf of Mexico Date Entered: May 15, 2017		Yes	No	No	No	No	No	No		No		$ 750,000.00	$ -	

	Research and Education	5638	7/12/2017	Reducing Red Snapper Discards Using a Collaborative Fishermen's Quota Bank	NOAA Project ID#13276: This project uses an existing Quota Bank to quantify and avoid red snapper bycatch in the commercial grouper-tilefish fishery. The Deepwater Horizon event harmed red snapper, resulting in 55-220 tons of foregone production through direct kills and in longer-term injuries, from decreased reproduction to tissue lesions. Commercial fishermen are working with managers to protect red snapper while the spillâ€™s impacts play out. But itâ€™ll be difficult to rebuild this fishery without a complete accounting for bycatch in the quota system. This project provides up-to-date data about red snapper bycatch to incorporate into quota-setting. Together with commercial fishermen, managers can proactively reduce red snapper killed through bycatch so the population can continue to recover from the spill. Red snapper managers lack reliable data on red snapper bycatch in the grouper-tilefish fishery, instead extrapolating from observer and self-reported data. This is problematic in light of commercial grouper-tilefish discards. Since red snapperâ€™s historical base was in the western Gulf, some eastern Gulf fishermen canâ€™t get allocation to retain their red snapper catch. Since discard mortality rates for commercial hook/line fisheries are 55-95%, this means red snapper quotas donâ€™t cover all red snapper killed. In order to set quotas accurately and maintain a positive rebuilding trajectory, bycatch in the commercial grouper-tilefish fishery must be accounted for. By quantifying bycatch and discards, this project ensures these dead snapper count toward the quota and are no longer wasted catch. The PDARP specifies that quota banks â€œcan help return injured natural resources and services to baseline and compensate for interim losses by reducing reef fish discards.â€ In 2015, the Gulf of Mexico Reef Fish Shareholdersâ€™ Alliance launched the first and only Quota Bank in the Gulf. The Quota Bank partners with qualified grouper fishermen in the Eastern Gulf to cover their red snapper bycatch an d assist young red snapper fishermen. There is a growing nationwide movement of permit banks. The Cape Cod Fisheries Trust, in partnership with UMass Dartmouth, proved their scallopers had minimal flounder bycatch in a newly-opened area. Permit banks in three fishing towns provide quota to cover bycatch and spatial management plans through the California Groundfish Collective. Evidence suggests Collective fishermen have less bycatch than non-participants. The Maine Coast Fishermenâ€™s Associationâ€™s building a â€œrisk poolâ€ to help fishermen avoid and account for cod catch. While quota banks are new to the Gulf, theyâ€™re a well-established tactic for helping fishermen address bycatch. This project uses the Quota Bank to quantify and avoid red snapper bycatch in the grouper-tilefish fishery. It provides up to 100,000 lbs of red snapper allocation to fishermen to cover bycatch, incentivizing participation in bycatch reduction programs, like gear research/modification and hotspot identification, and collecting bycatch data through electronic video monitoring, electronic logbooks, effort-level data collection, and NMFS observer coverage. This is a big incentive- many grouper-tilefish fishermen see discards as a serious inefficiency theyâ€™re eager to address. The study provides managers with accurate,		Yes	No	No	No	No	Yes	No		No		$ 8,500,000.00	$ -		
	Research and Education	5639	7/12/2017	Reproductive output of sea turtle nests on remote beaches in the Gulf of Mexico	NOAA Project ID# 13284: Most sandy beaches in the Gulf of Mexico (GoM) are surveyed for sea turtle nesting activity by agencies or volunteer groups. However remote beaches, particularly along GoM barrier islands, are often surveyed infrequently or not at all. Therefore, the contribution of those beaches to sea turtle population recovery is unknown. For sea turtles, there are several measures of reproductive output including clutch frequency, hatching success, incubation duration, nesting success (# of nesting crawls/total # of crawls) and clutch size. These parameters may vary greatly among nesting beaches. Turtles nesting along the US beaches of the Gulf of Mexico represent three Recovery Management Units: Dry Tortugas, Peninsular Florida (Florida/Georgia border to Pinellas County, FL) and northern GoM; Franklin County, FL through Texas). Although part of the same population, turtles in these nesting groups differ in several ways. Hart et al. (2013) showed that turtles nesting in the northern GoM express low nesting site fidelity relative to other nesting groups and Lamont et al. (2012) suggested that turtles in the northern GoM exhibit lower nesting success (# of nesting crawls/total # of crawls) than other nesting groups. In addition, these nesting groups vary by size with the Dry Tortugas and northern GoM groups representing the two smallest groups in the population (Richards et al. 2011). Because consistent surveys are not conducted on many remote beaches used by turtles in these subpopulations, baseline data on reproductive output is not available. Without that information, increases in measures of reproductive output including number of hatchlings produced, cannot be determined. We propose to establish baseline reproductive output measures for several remote beaches in the GoM including Dry Tortugas National Park, Everglades National Park and Dog Island, FL. Date Entered: May 15, 2017	Monroe County,Franklin County,Jackson County,Harrison County	Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -		
	Research and Education	5640	7/12/2017	Reduce impact to sea turtles in the US Gulf of Mexico	NOAA Project ID#13287: Audubon Nature Institute will work to reduce the impact to sea turtles in the US Gulf of Mexico through turtle excluder device (TED) education and implementation assistance in the shrimp fishery. Funding of this project will contribute to the continued recovery of sea turtles, especially Kempâ€™s ridleys, in the Gulf of Mexico, by reducing the impact of fisheries on these populations. A major threat to the sea turtle population in the Gulf of Mexico is unintended catch by fisheries. Sea turtle habitats overlap with the Gulf of Mexico shrimp fishery and incidental capture of sea turtles in shrimp trawls has been cited as one of the many threats to their recovery. Since the 1980s, TEDs have been required in otter trawls that fish offshore, but not in skimmer trawls that typically fish in shallower waters. TEDs have been proven to reduce sea turtle mortality and NOAA studies indicate proper compliance with the upcoming TED regulations will lead to as many as 2,500 turtles protected annually (NOAA 2016). As part of this project, Audubon Nature Instituteâ€™s Gulf United for Lasting Fisheries (G.U.L.F.) plans to host industry workshops to educate fisherman about the new rule, and coordinate dock days to ensure TEDs are installed properly to increase the number of sea turtles protected in the Gulf of Mexico. Date Entered: May 15, 2017	Jefferson, Chanbers, Galveston, Brazoria, Matagorda, Jackson, Victoria, Calhoun, Refugio, Ransas, San Patricio, Nueces, Kleberg, Kenedy, Wilacy, Cameron in Texas, Cameron, Vermilion, Iberia, St. Mary, Terrebonne, Lafourche,	Yes	No	No	No	No	No	No		No		$ 340,000.00	########		
	Research and Education	5642	7/13/2017	Reducing Bycatch of Marine Mammals in Commercial and Recreational Fisheries	NOAA Project ID#13303: Marine mammal bycatch refers to any marine mammal adversely affected as a result of being unintentionally entangled, entrapped, ensnared, or caught by nets, lines, traps, or hooks, or otherwise impacted by fishing gear. Bycatch is the greatest direct cause of marine mammal injury and death in the United States and around the world. Bycatch of marine mammals in Gulf of Mexico commercial fisheries has the potential to prevent the recovery and restoration of marine mammals that have been reduced as a result of the Deepwater Horizon oil spill, including bottlenose dolphin (all stocks), Atlantic spotted dolphins, pantropical spotted dolphins, pygmy sperm whales, Risso's dolphins, and short-finned pilot whale. Fisheries of particular concern include the menhaden purse seine, shrimp trawl, shark gillnet, pelagic longline, reef fish, and charter boat/headboat fisheries. Studies are needed in the following areas: - The identification of measures that can be used to reduce bycatch of marine mammals in high priority Gulf of Mexico commercial and recreational fisheries while maintaining the economic viability of those fisheries. Measures to investigate and test could include, but are not limited to, alternative fishing gear and fishing methods, time-area restrictions, and removal of lost or derelict fishing gear (i.e., traps, pots, and gillnets). - Ways to create economic incentives for reducing marine mammal bycatch through, for example, incentive-based fishery bycatch measures. - The ecological effects of fishing on marine mammals, their prey species, and the Gulf of Mexico marine ecosystem. Date Entered: MAy 15, 2017		Yes	No	No	No	No	Yes	No		No		$ -	$ -		

	Research and Education	5646	7/14/2017	A combined physical, behavioral, and demographic approach to identify Gulf Sturgeon spawning sites in the Pascagoula River: characterizing what is known to inform the unknown	NOAA Project ID#13188: Western population segment Gulf Sturgeon (GS; natal to the Pearl and Pascagoula rivers) appear to be recovering at a slower rate than those in the east. Of all GS populations, the Pascagoula River population is estimated to be the smallest (about 220 adults). The U.S. Fish and Wildlife Service often uses the 3-R framework (representation, resiliency, and redundancy) of Schaffer and Stein (2000) to assess population recovery. Resiliency of a population is associated with the size and demographics that describe subpopulations (segregated spawning) and redundancy of subpopulations to spread extinction risks. Currently, only one spawning site is known for the Pascagoula River population (no spawning sites are known for the Pearl River), located in the Bouie River (a tributary of the Leaf River), but other spawning sites likely occur in the Chickasawhay River. This site was roughly characterized but demonstrated differences compared with spawning sites reflective of eastern population segment GS having outcroppings of sand/clay rather than limestone. Before any restoration project begins, the crucial question of â€œWhat are we restoring to?â€ must be asked. For the Pascagoula River GS population, spawning habitats represents a key knowledge gap in asking that question and in answering if this population is resilient and redundant. To overcome this knowledge gap and inform restoration we advance four objectives: 1: Characterize the Bouie River spawning site in terms of bottom hardness and steepness; sediment grain size, composition, and POC; and environmental parameters). Passive acoustic telemetry receivers will be deployed upstream, downstream, and at the spawning site to determine which individuals arrive at the site, the duration, and time-of-year. Adult GS will be tagged for the proposed project and the number of telemetered GS that may visit the spawning sites will be augmented by those tagged (using 10 and 5 year tags) for ongoing projects. 2: Deploy acoustic receivers at potential spawning sites in the Leaf and Chickasawhay rivers using data gathered in Objective 1 and previous suggestions (Heise et al. 2004). If GS are detected, the same habitat metrics as in Objective 1 will be quantified. Once quantified, a multivariate approach will be used to reduce the dimensionality of the data such that the ecologically informative parameters can be used to help identify spawning sites in other systems (e.g., Pearl River). 3: Using genetic data collected for this project and archived samples collected since 2010, we will a) perform parentage and kinship analyses to quantify relatedness among juveniles, b) determine the relative importance of individual parents to juvenile GS recruitment, and c) determine if individuals associated with various spawning sites represent genetically distinct groups (from Objectives 1-2). We will obtain sex data from juveniles and adults using circulating reproductive hormones to provide sex-ratios and the sex of potential spawners to better interpret the parentage analysis results. We propose obtaining genetic data from juveniles (rather than collecting eggs) to avoid removing potential recruits from the population. The combined genetic and sex data will provide data on the resiliency of this population. 4: Synthesize data from Objectives 1-3 to provide resource managers with information	Forrest County,Clarke County	Yes	No	No	No	No	Yes	No		No		$ 1,100,000.00	$ -	
	Research and Education	5647	7/14/2017	Informing restoration efforts in the Mississippi Sound: Quantifying Gulf Sturgeon winter foraging habitat occupancy and coastal pelagic finfish habitat use with passive acoustic technology	NOAA Project ID#13110: Mississippi Sound currently has a variety of planned, ongoing, or completed habitat restoration projects (e.g., living shorelines, island restorations, oyster reef replenishment), and compensatory restoration projects (artificial reefs). All of these are within federally designated, critical habitat for Gulf Sturgeon (GS), and habitat for important coastal pelagic finfish (Mackerel, Red Drum). These projects have the potential to alter habitat characteristics (sediment composition, water quality, macroinvertebrate abundance) important to these fish. Restoration efforts require assessment for potential impacts on these species (e.g., loss or conversion of foraging habitat), specifically for GS. Unfortunately, most of the science related to GS habitat dependency is derived from work in their eastern range, and may not be applicable to silty-bottom habitats in the west. Additionally, artificial reef projects may enhance habitat for coastal finfish, but bury GS habitat. The objectives of this project are to describe habitat-specific occupancy patterns for GS and other coastal pelagic finfish (Mackerel, Red Drum) within Mississippi Sound, in relation to restoration projects. Specifically, we will (1) develop an acoustic telemetry array within restored and non-restored habitats to monitor acoustically tagged target species to determine habitat use and occupancy, (2) assess use patterns of these species in restored versus non-restored regions, and (3) provide a decision support tool to inform resource managers and restoration practitioners of the impacts each restoration effort has on habitat use by these species. The five-year revision of the Gulf Sturgeon Recovery Plan highlighted the need to identify habitat parameters for GS estuarine feeding habitats, especially of western populations (Pearl and Pascagoula Rivers), which have been slower to recover than their eastern counterparts; it also renewed consideration for GS habitat restoration. Habitat-specific occupancy patterns for GS in estuaries are lacking, particularly for juveniles and sub-adults. Therefore, we will fill knowledge-gaps related to what actually constitutes suitable GS habitat by size-class. Mackerels (Spanish and King) and Red Drum may use the same habitats as GS, but during different seasons and in different ways (prey selection). These species likely benefit from compensatory restoration more than GS, but this has not been quantified. Based on occupancy patterns of these species between restored and non-restored habitats (e.g., silty bottoms, oyster and artificial reefs, areas adjacent to living shorelines), we will determine if restoration events affected typical habitat use in the region. Because this assessment will be specific to restoration events (e.g., living shorelines, reefs) as well as to target species, the results will allow managers to determine the possible effects that implementation of each restoration type could have on the species present. This project will also create opportunities for scientists working with other acoustically tagged species in Mississippi Sound and north-central Gulf of Mexico. Methodology: Acoustic telemetry will be used to assess occupancy of target species in various restored and non-restored habitats in a paired-manner. Side scan sonar will assess habitats for hard bottom and relief prior to comprehensive	Harrison County, Hancock County, Jackson County	Yes	No	No	No	No	Yes	No		No		$ 2,585,000.00	$ -	
	Research and Education	5649	7/14/2017	Restoration through education: raising awareness about the largest habitats of the Gulf of Mexico - the deep-sea	NOAA Project ID#13259: The deep sea (>200 m) represents by far the largest habitat of the Gulf of Mexico, yet it is often overlooked by resource managers, scientists and the general public, who are often unaware that rich and diverse ecosystems can thrive in deep-water environments under the right conditions. While deep-sea ecosystems are out of sight and out of mind to most people, they are not immune to anthropogenic impacts, as they are threatened by oil and gas exploration, deep-sea trawling and ocean acidification much more than their shallow-water counterparts. Improving the management, conservation and protection of the Gulf of Mexico, will ultimately require an increased appreciation for the value of its ecosystems by diverse stakeholders, and education and outreach are integral to this effort. We therefore propose to conduct a coordinated outreach and education campaign to raise awareness about deep-sea ecosystems of the Gulf of Mexico. The campaign will target both informal, as well as formal educators at the K-12 level, via the development of educational films, curricula, lesson plans and seminars. Through this targeted campaign we seek to bring the deep-sea of the Gulf of Mexico into classrooms nationwide, and thereby help restore the largest ecosystems of the Gulf. Date Entered: May 15, 2017		Yes	No	No	No	No	No	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	5660	7/19/2017	Research to Determine Gulf of Mexico Soundscape and Effects of Sound on Marine Mammals	NOAA Project ID#13323: The Gulf is one of the most heavily industrialized bodies of water in the world, with numerous sound-producing human activities, including commercial shipping, oil and gas development (including seismic studies), platform removals (including the use of explosives), coastal construction (including pile driving), and military operations and training. Excessive sound can cause disruption of important marine mammal behaviors, andâ€"at close rangeâ€"physiological injury. Excessive sound can also mask biologically important sounds, including communication calls between individuals of the same species. Research is needed to determine: - The Gulf of Mexico "soundscape" - sources of sound in the Gulf and associated sound levels and how they vary spatially and temporally. - The effects of bathymetry, temperature, and other oceanographic features on sound propagation. - The direct, indirect, and cumulative effects of human-caused sound on marine mammals and their prey species. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	5661	7/19/2017	Minimizing Effect of Human Sources of Sound on Gulf of Mexico Marine Mammals	NOAA Project ID#13340: Excess sound levels have the potential to prevent the recovery and restoration of marine mammal populations that have been reduced as a result of the Deepwater Horizon oil spill, particularly sperm whales, Bryde's whales, and bottlenose dolphins. Measures have been identified for mitigating the effects of anthropogenic sources of sound from coastal construction (pile driving), oil and gas exploration and decommissioning (seismic airguns and explosives for platform removals), and military training activities (sonar and explosives), but the effectiveness of those measures has not been fully tested and verified. Research and testing is needed to develop effective and reliable mitigation measures for activities that are particularly harmful or for which no measures currently exist. Mitigation should be tested for the different species and operating conditions that occur in the Gulf. Measures could include, but are not limited to, ship quieting technologies, bubble curtains and double piles (for pile driving), marine vibrosels (as an alternative to seismic airguns), and non-explosive decommissioning options (for platform removals). Also needed are effective and reliable acoustic aids (such as passive acoustic monitoring) for use in detection of marine mammals in low light or nighttime conditions. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	

	Research and Education	5666	7/21/2017	Gulf of Mexico Deep Water Column Monitoring Program	NOAA Project ID#13363: The Deepwater Horizon Oil Spill (DWHOS) highlighted the lack of baseline data for deep-ocean ecosystems in the Gulf of Mexico (GoM). Of the GoM open ocean habitats, the deep water column is by far the largest affected by the DWHOS. Long-term monitoring of the diversity and abundance of the pelagic fauna (0-1500 m) of the open GoM, including oceanic fish larvae and the microbial flora, is essential for evaluating impacts of natural and anthropogenic events. We propose multi-year expansion of knowledge as a restoration tool. â€œResearch as restorationâ€ is an approach with precedence, enacted after the Exxon Valdez oil spill and pursued subsequent to the DWHOS event. A 3-year (to start) sampling and analysis project that follows the methods developed during an intensive NOAA NRDA program in 2010-11 (ONSAP) and continued during 2015-2017 (DEEPEND Consortium) is envisioned. Analyses of these time series have revealed that the abundance of pelagic fishes decreased nearly an order of magnitude between 2011 and 2016. This substantial change was not obvious shortly after the spill and supports the importance of a long-term approach. Time-series investigations are known to be critical for assessment of ecosystem variability and recovery. We propose an integrated program that includes discrete-depth sampling and water collections simultaneously with acoustical sensing. With respect to surveys of economically important fishes (e.g., billfishes, tunas, dolphinfishes, swordfish), continuation of a long-term epipelagic survey of ichthyoplankton conducted during the primary spawning periods of many taxa is essential. Epipelagic and deep pelagic surveys can be merged logistically and provide insight on the vertical coupling of pelagic communities found from the surface to >1000 m. Remote sensing information and physical modeling will be used to direct the locations of at-sea sampling. We suggest that identical sampling procedures and gear used in prior surveys be adopted for future monitoring to eliminate methodological bias. In addition, a focus will be given on the continental shelf break/slope of the GoM, a region of enhanced benthopelagic coupling (e.g., sonic scattering layers intersecting benthic habitats) as well as primary foraging grounds for marine mammals and seabirds. It is also the transition area for material exchange between oceanic to continental shelf domains. The rationale for the project stems from the recent discovery that that over half of all fish species in the GoM spend all or part of their lives in the open ocean. In terms of total GoM fish abundance, deep-pelagic fishes are the most numerous. Endangered toothed whales, seabirds, and epipelagic game fishes rely on deep-pelagic fishes, squids, and shrimps as prey. Further, the transfer of energy through open ocean food webs is higher than typically assumed, suggesting a much greater role for of deep-pelagic animals in oceanic ecosystems. In short, the deep-sea animals are a key component of the GoM open ocean ecosystem. A key element of the proposed project is tight linkage with NOAA to help inform restoration planning, implementation and evaluation. We suggest using ecosystem modeling approaches to achieve this result. The project suggested here has been endorsed by the		Yes	No	No	No	No	Yes	No		No		$ 6,900,000.00	$ -	
	Research and Education	5667	7/21/2017	Impact of water quality conditions on submerged aquatic vegetation foraging resources for the northeastern Gulf of Mexicoâ€™s injured bird, marine mammal, and fish populations	NOAA Project ID#13452: The proposed activities directly address the NRDA and Open Ocean TIG goals of protecting and restoring habitats on which the Gulf of Mexicoâ€™s injured birds rely (PDARP section 5.5.12.1). Submerged aquatic vegetation (SAV) beds are critical habitats that constitute an important food source for regional and migratory bird populations. These activities also support the needs of several other restoration types, as SAV beds are an important habitat and foraging resource for dolphins, manatees, see turtles, and local fish populations. Unfortunately, dramatic declines in seagrass coverage have occurred across the northeast coast of the Gulf of Mexico since the mid-1900s. Some SAV populations have stabilized and even begun to recover in recent years, but the reasons for these improving trends are not well understood. This project advances our understanding of the factors affecting SAV distribution and abundance in coastal habitats encompassing the Mississippi and Florida areas of the Gulf Island National Seashore (GUIS), and extends those insights across critical habitats along the Florida panhandle (St. Georgeâ€™s Sound and Choctawhatchee, St. Andrews, Perdido, St. Josephs, and Apalachicola Bays). Declines in SAV community health and productivity across this region have been linked to a combination of water-quality factors, including excess nutrients from nonpoint and point source pollution and increases in sedimentation and turbidity from surface runoff. Targeted monitoring will better quantify the contributions from major sources of nutrients and turbidity (wastewater treatment plants, surface runoff, and riverine inputs), as well as the timing and extent of these influxes. SAV abundance is also negatively affected by dredging, boat traffic, and shoreline modifications (e.g. bulkheads and groins). Better information on nutrient and sediment influxes will help to elucidate the relative importance of water quality conditions, other anthropogenic factors such as shoreline har dening, and natural sources of environmental variability. Hydrodynamic models will be used to examine how these factors influence SAV distribution and abundance. Multivariate statistical approaches will provide additional insights and lines of evidence to support adaptive management of the region's SAV habitats. Integrating efforts across these systems generates regional insights while building site-specific knowledge to support local restoration projects. Monthly data collection at several locations in the GUIS will build on existing monitoring programs and include measurements of temperature, salinity, dissolved oxygen, pH, light attenuation, turbidity, water column nutrient and sediment concentrations, and SAV cover and epiphyte loads. Light sensors at select sites will help to determine the importance of high frequency changes in light levels in SAV beds. During critical water-quality periods (i.e. growing season, spring runoff events, storm/flood events, and tropical storms), additional water-quality monitors will be deployed at locations not currently monitored. Monthly water quality measurements and biannual seagrass productivity surveys will also be conducted at sentinel sites in St. Georgeâ€™s Sound and Choctawhatchee, St. Andrews, Perdido, St. Josephs, and Apalachicola Bays and will also complement existing monitoring	Jackson County,Escambia County,Santa Rosa County,Gulf County,Franklin County,Walton County,Bay County	Yes	No	No	No	No	Yes	No		No		$ 600,000.00	$ -	
	Research and Education	5668	7/24/2017	Genetic and chemical indicators of population health, recovery, and resilience in the Gulf of Mexico	NOAA Project ID#13450: The primary goal of this project idea is to continue monitoring population health of water column fish and invertebrate communities from the open ocean (0-1500 m) on both short (generational) and long (evolutionary) timescales, using genetic and analytical chemical methods. This information is critical for understanding the recovery, resilience and long-term consequences of the DWHOS on key deep-pelagic species. Genetic diversity is often used as a proxy to measure population health. This measurement is intimately tied to an organismâ€™s ability to survive and adapt to a changing environment. Genetic diversity can be reduced by rapid declines in population sizes following a major disturbance event. Low genetic diversity has severe consequences within a population, such as increased extinction risks and reduced recovery rates. A second metric often used to infer population, and ultimately ecosystem, health is â€œpopulation connectivity,â€Ebr the amount of genetic information shared and/or exchanged between populations. For this reason, determining how genetic diversity is shared and exchanged within and across the GoM has huge implications for the recovery and resilience of a species and the ecosystem. Alongside estimates of genetic diversity and connectivity, chemical analyses of deep-pelagic fauna can be measured to assess the persistence of oil-derived hydrocarbons in the environment and their potential impacts on the community. Within crude oil mixtures, PAHs (polycyclic aromatic hydrocarbons) are highly soluble in water and are relatively easily taken up by oil-exposed biota. PAHs in the water can cause lethal and sublethal effects (e.g. endocrine disruption, growth inhibition, genetic damage) to marine organisms via ingestion and/or absorption through the skin. We propose conducting a robust ten-year time series analysis that characterizes changes in genetic diversity, connectivity, and PAH exposure in deep-pelagic GoM communities. Over the past 7 years we have collected and analyzed samples of invertebrate and fish from before DWHOS, immediately following the spill (ONSAP cruises 2010-11), and 5-7 years post-spill (DEEPEND cruises 2015-17). To date, we have found several intriguing results: 1) a general increase in crustacean genetic diversity from 2011-16, suggesting possible speciesâ€™ recovery following the DWHOS 2) GoM populations have unique genetic diversity, suggesting possible â€œoilâ€ resistance 3) genetic connectivity may be linked to life history, suggesting recovery and resilience potential may be predictable 4) elevated PAHs in deep-sea fishes following the DWHOS suggesting higher intake rates compared to clearance rates 5) a recovery to baseline levels in 2015-2016 in only some biota groups (octopus) 6) continued high PAH levels in eggs, potentially affecting the long-term stability of the deep-pelagic community. We propose a continued 3-year program that builds upon our genetic and PAH datasets collected over the past seven years. First, we will continue to monitor genetic diversity and PAHs across select crustacean and fish taxa, as a measure of population health. We will use established methods implemented during the DEEPEND project, but also integrate new applications that will test for genomic signatures of population reduction or		Yes	No	No	No	No	Yes	No		No		$ 2,400,000.00	$ -	

	Research and Education	5669	7/24/2017	Gulf of Mexico Open Ocean Trophic Ecology Program	NOAA Project ID#13437: The objective of this project is to examine in detail the trophic connections of fishes, cephalopods, and crustaceans (nekton, collectively) inhabiting the epi-, meso-, and bathypelagic regions of the GoM using stable isotope, fatty acid and metabarcoding analyses. The specific goal of this study is to use natural dietary tracers and metabarcoding analysis to examine the trophic ecology of meso- and bathypelagic nekton and to elucidate vertical food web structure (0 to 1500 m depth) patterns in order to quantify trophic connectivity in the northern GoM. Stable isotope, fatty acid, and metabarcoding analyses have been used successfully to examine food web structure in many systems. In this study samples collected during previous sampling efforts (NRDA Offshore Sampling and Analysis Program and DEEPEND, www.deependconsortium.org) as well as proposed sampling efforts (please see Gulf of Mexico Deep Water Column Monitoring Program project suggestion) will be analyzed for stable isotopes of carbon (Î´13C) and nitrogen (Î´15N) to evaluate food web structure, examine flow of organic matter and determine trophic relationships of target organisms collected in the GoM. Analysis of polyunsaturated fatty acids (PUFA) will serve as indicators of dietary sources, allow for the reconstruction of dietary histories, and provide additional data that may not have been elucidated through previous stomach content or stable isotope analyses. Because gut contents of many deep-sea taxa are difficult to due to mastication, metabarcoding, which allows for the identification of prey taxa by extracting species-specific DNA sequences, will be used to identify stomach contents of deep-sea crustaceans and cephalopods. Additionally, we propose to incorporate tissue analyses from upper level predators (large fishes, sharks, mammals) already collected in the GoM from colleagues over a similar spatial and temporal period. Bayesian mixing models (e.g., mixSIAR) designed for stable isotope and fatty acid data will be used to estimate prey contributions to predators. All trophic analyses will be focused on key â€œmodel speciesâ€ which will include both vertically migratory and non-migratory fish and invertebrate species with multiple feeding strategies. By examining stable isotopes, fatty acids, and gut contents of migrating and non-migrating fauna this project will shed light on the nature of energy and carbon transfer across vertical ocean zones and describe trophic connectivity in the region of the GoM where the DWHOS occurred. Results of this study will provide important information on the role of different migratory and non-migratory prey types to predators in the GoM allowing researchers to identify species or taxonomic groups that may serve as â€œvectorsâ€ between functional groups or to commercially valuable fisheries stocks, sea birds, and protected oceanic cetaceans, all of which rely on deep-pelagic nekton as prey. The detailed elucidation of feeding dynamics within the major taxa of nekton will allow for multidisciplinary studies based on the larger-scale distribution of biomass. Finally, by describing vertical and horizontal patterns in the trophic structure of deep-pelagic nekton this project will provide baseline trophic data that can be used to inform spatially explicit ecosystem models that will provide		Yes	No	No	No	No	Yes	No		No		$ 475,000.00	$ -		
	Research and Education	5672	7/24/2017	Adaptive management for sustainable fisheries and ecosystem restoration in the Gulf of Mexico.	NOAA Project ID#13257: Conventional single-species stock assessments determine if a fish stock is experiencing excessive fishing mortality (known as overfishing), if the stock has been reduced to low abundance (known as overfished), and forecast a sustainable fishing mortality rate. A sustainable harvest policy is prescribed by combining this rate with a forecast of fish abundance. However, projections from single-species assessments may not adequately capture uncertainty when, for instance, targeted species are co-caught by fishing gear and interact strongly, as in a reef fish assemblage. These shortcomings may be significant impediments to effective management of depleted and recovering stocks. In order to improve management decisions targeting long-term sustainability of ecosystems and fisheries in the Gulf of Mexico, we propose to develop decision support tools that are rooted in decision theory: structured decision making (SDM) and adaptive resource management (ARM) in particular. SDM (note that ARM is a special case of SDM for dynamic decisions, with scientific uncertainty) includes at least five components: management objectives, potential management actions, model of system behavior (which project consequences of management actions on the system), a monitoring program to monitor the system state and finally an optimization method to identify decision that are optimal relative to the management objectives (e.g., Martin et al. 2011). We propose a SDM/ARM framework to assist managers with identification of optimal harvest policies that balance competing management objectives (socio-economic, ecological sustainability and impact on ecosystems). We will consider multiple fish populations; specifically we intend to focus on the grouper-snapper complex. The SDM tools will be developed as extensions to stock synthesis models (Methot and Wetzel 2013), thereby integrating the SDM tools with the stock assessment and inheriting the same data uncertainties and population dynamics. We will also leverage existing Gulf of Mexico ecosystem models to project consequences of potential management actions on the system, including both Atlantis (Ainsworth et al. 2015) and Ecopath with Ecosim (Chagaris et al. 2015) models. We will additionally evaluate the performance of our decision support tool in a simulation environment using management strategy evaluation (MSE). This process will also inform data collection programs and may help end users (i.e., natural resource managers from FWC and NOAA) prioritize research to fill critical data gaps and characterize the key sources of error associated with monitoring. Specifically we would discuss how to reduce errors associated with imperfect detection and spatial autocorrelation. Our approach will require a multi-disciplinary effort to engage stakeholders, and will require elicitation of socio-economic values associated with the consequences of potential management actions. Therefore, we propose to include a human dimension component to our project. We would apply concepts of behavioral economics to gain insights into stakeholdersâ€™ behavior and to help improve the effectiveness of outreach programs. This could in turn increase voluntary fisheries-related actions to increase fish biomass. Additionally, Co-PI Dr. Luiz		Yes	No	No	No	No	Yes	Yes		No		$ 1,800,000.00	$ -		
	Research and Education	5673	7/24/2017	Gulf of Mexico survey of fishing pier related sea turtle interactions	NOAA Project ID#13466 This restoration project focuses on reducing bycatch of sea turtles in pier-based recreational fisheries. We propose to implement multi-year angler surveys on fishing piers in the Gulf of Mexico, including education/outreach to rec anglers. This project could be scaled to one state, or implemented in multiple states throughout the GOM. NOAA has developed a set of pier survey forms for national implementation. The forms are currently undergoing approval by OMB under the Paper Reduction Act. We propose to use existing forms, once PRA is complete, to initiate implementation of this survey. Each pier would also be characterized, and local stranding networks would collect specific data on the nature of sea turtle captures when they occur, for comparison to the survey data. Survey results and turtle incidental capture data, would help shape the development, testing, and voluntary implementation of mitigation measures to reduce sea turtle bycatch at fishing piers. Education can help reduce mortalities so outreach efforts would include placing signs with stranding responder contact information, monofilament line recycling bins, and development of an app that can report incidental captures and strandings, provide instructions on what to do if you catch a turtle, the hotline number for the closest stranding network responder, and a way to report the interaction. Background: Sea turtle incidental capture by recreational anglers is on the rise nationwide (STSSN). Since 2010, 1,094 sea turtles, primarily juvenile Kempâ€™s ridleys, were incidentally caught in Mississippi alone. In response to captures, a pilot survey to collect data on angler fishing practices and sea turtle interactions was conducted in 2013. Anglers were asked questions about fishing practices, turtle observations and captures. Outreach was a key component of the project and was conducted at the end of each survey. The MS STSSN also collected data (bait, gear type, outcome) on every sea turtle incidental capture for comparison between angler practices and turtle interactions. Preliminary results yielded a high willingness to participate and valuable information was obtained. During and after the survey period, we noticed an increase in reported incidental captures, which could possibly be attributed to our outreach efforts. Success could be measured by a decrease in stranded turtles with fishing gear, successful rehab & release, and implementation of mitigation measures. Date Entered: May 16, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 400,000.00	$ -		
	Research and Education	5677	7/25/2017	Sea turtle and mammal mortality locations	NOAA Project ID#13477: This project will increase sea turtle survival through enhanced mortality investigation and early detection of and response to anthropogenic threats. Strandings are often the only early warning indicator for at-sea mortality of sea turtles, and can be used to help identify mortality sources (ex. fisheries interactions & vessel strikes). However, documented strandings only represent a percentage of total at-sea mortality, because many factors influence whether or not a carcass will strand and be reported. These factors include, time of year, geographic location, decomposition rate and oceanographic conditions. We propose to deploy effigies, which closely mimic drift characteristics of sea turtle carcasses, in federal and state waters at ~30 locations from Texas-Florida to determine the percent of carcasses that actually strand on GOM beaches during March-July which is peak stranding season in the Gulf. Deployments will occur in areas with documented sea turtle occurrence and known shrimping effort or in areas of other potential mortality sources (i.e. ship traffic). Effigies will be deployed twice a month for five months. This project is scalable by location & duration. This methodology is successfully being used in Mississippi (Early Restoration), and expansion to other regions of the GOM is recommended. Existing ocean models are fairly adequate on a large scale; but models show major discrepancies when used to backcast small objects such as sea turtles at fine scales. The effigies are required to provide invaluable data specifically on the behavior of sea turtle carcasses in various ocean conditions in the GOM, and will be directly used for interpretation of strandings, measures of % recovery, and raw data available to the ocean modeling community to further ground truth and modify ocean models. We will also develop a web based portal that can be used by Stranding Networks, managers and enforcement to input stranding data and to provide real time back cas t model outcomes. If a spike in strandings is observed, the probable area of the mortality as determined by the back casting model can be used to help direct the efforts of the NOAA Gear Monitoring Team and state/Federal enforcement. Success will be determined by a reduction in strandings, use of program and feedback from users. This carcass drift work is focused on sea turtles, but the program could be modified to include marine mammals. Date Entered: May 16, 2017	numerous	Yes	No	No	No	No	Yes	No		No		$ 375,000.00	$ -		

	Research and Education	5688	7/28/2017	Restoration of Gulf of Mexico pelagic and broad scale fisheries: addressing movement ecology data needs	NOAA Project ID#13172: This project will use multiple tracking technologies, as well as the Integrated Tracking of Aquatic Animals in the Gulf of Mexico network (iTAG-n) and research group (iTAG-r) to collect important data, difficult or impossible to assess with traditional capture-based methods. The focal species will be: yellowfin tuna (Thunnus albacares), greater amberjack (Seriola dumerili), cobia (Rachycentron canadum), red drum (Sciaenops ocellatus), gag grouper (Mycteroperca microlepis) and red snapper (Lutjanus campechanus). The DWH oil spill occurred in the northern GoM during the spring and summer of 2010, which would overlap in space and time with either the spawning or early life stages of these species. This is of special concern with water column pelagic spawners, as where and when they reproduce (i.e., spawn) and consequent dispersal dynamics affect offspring survival in ways not seen in most terrestrial species. In addition, larval cardiotoxicity is documented for several of these species, resulting in heart-related abnormalities that could impact long-term stock productivity, especially in stocks already highly impacted by fishing and anthropogenic stressors. All focal species support important fisheries and are considered overfished, have decreasing landings or stock assessment scientists or fishermen are concerned about the stocksâ€™ health. Specific concerns associated with the focal species include: (1) yellowfin tuna landings are decreasing and deepwater oil rigs may change natural migratory behavior and spawning site selection and consequently reproductive success; (2) the greater amberjack stock is overfished and not rebuilding as expected, and there is a need to better understand how artificial reefs affect spawning site selection and fidelity; (3) the recent cobia stock assessment was inconclusive due an incomplete understanding of stock structure and connectivity and fishermen are expressing concern at low catch levels; (4) red drum were affected locally by the oil spill demonstrating anemia and presumed decreased fitness and impaired reproduction but we do not have the needed understanding of spawning migrations and connectivity to assess how this would impact the Gulfwide stock; and (5) both gag grouper and red snapper are assumed to have been impacted by the DWH oil spillâ€"and increased lesions were observed in adult red snapperâ€"but estimates of abundance and measures of recovery are hampered for both species due to a lack of movement data and cryptic mortality which may vary with habitat type, depth, and sex. This study will work closely with fishermen and integrate a series of Gulf-wide tracking projects that focus on evaluating depredation/release mortality and the effect of habitat (natural and artificial) on migratory behavior and spawning site selection. Data on migratory behavior is needed to distinguish between decreases in landings due to changes in catchability associated with changed movement behavior versus lower abundance due to the oil spill and overfishing. We propose to use multiple tagging approaches: pop-up satellite tags, archival implant tags, and acoustic telemetry tags, drawing on both the benefits of large scale tracking and the higher resolution data obtained through acoustic and archive tags. Data from this project will provide critical information		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	5689	7/28/2017	Integrative Data Infrastructure for Gulf of Mexico Mesophotic and Deep-Benthic Habitat Assessment and Restoration	NOAA Project ID#13387: OBJECTIVES: - Build, enhance, and expand upon existing federal data management infrastructure for mapping, video analysis, and habitat suitability modeling of deep-sea corals to better support understanding and restoration of mesophotic and deep-benthic biogenic habitats. - Support the collection and analysis of new information from Gulf restoration studies and provide tools to guide and help coordinate deepwater surveys and restoration efforts. RATIONALE: Mesophotic and deep-sea coral habitats represent rare, valuable, and vulnerable communities in the Gulf of Mexico. Both mesophotic (50-150 m) and dep-sea coral (1500-1800 m) habitats were damaged during the DWH oil spill and will be a focus of restoration activities. NOAAâ€™s Deep Sea Coral Research & Technology Program is Congressionally-mandated inter-alia to: identify existing research on, and known locations of, deep sea corals; map locations of deep sea corals; conduct research on deep-sea corals, including survey techniques. The program works across NOAA Line Offices to implement studies and has developed a national database of deep-sea corals and sponges and an on-line map portal (https://deepseacoraldata.noaa.gov/). The proposed activities support both objectives of the PDARP through data analysis, advanced habitat suitability modeling, and management of relevant data: (1) Protect and manage mesophotic and deep benthic coral communities â€" The first priority is to understand the current or potential distribution of these communities. (2) Place hard ground substrate and transplant coral â€" The success of these restoration efforts will depend upon an understanding of the habitat and environmental factors that determine where such restoration activities are most likely to succeed. KEY ACTIONS AND DELIVERABLES: - Establish a Gulf of Mexico Mesophotic and Deep-Benthic Analysis & Data Management Team â€" Initial focus on Corals and Sponges and associated environmental data layers - Build capacity and supporting data management framework for image & video analysis of new and pre-existing benthic surveys â€" including image capture, analysis, and display of density, diversity, presence and absence measures for mesophotic and deep-sea corals and sponges - Develop a DSC Research Clearing House (or link to relevant existing clearing houses) with bibliographies, reports, and data summaries - Enhance the capacity of the Deep Sea Coral and Sponge Database (www.deepseacoraldata.noaa.gov) or develop new database(s) to include additional taxonomic groups and support restoration planning and monitoring. - Develop and support a state-of-the art display for data visualization and analysis (DSCRTP Map-Portal v.2), including interactive graphics and quality assurance tools. This would build on existing data infrastructure to integrate both biological (presence & absence data for coral and sponge taxa) and habitat/environmental data (multibeam mapping layers, habitat suitability modeling, oceanographic conditions). - Establish or enhance interoperability with key NOAA data systems already supporting Gulf science and restoration, including NCEIâ€™s Ocean Archive System and Office of Response and Restorationâ€™s DIVER system. - Advanced habitat suitability modeling for key taxa of restoration interest (e.g., Coral taxa		Yes	No	No	No	No	Yes	Yes		No		$ 10,000,000.00	$ -	
	Research and Education	5691	7/28/2017	A demonstration project to reduce bluefin and sea turtle bycatch increasing the set depth in the Gulf of Mexico (GoM) pelagic longline fishery.	NOAA Project ID#13498: The proposed project will restore of both bluefin tuna and sea turtles through the reduction on bycatch in the pelagic longline fishery. The GoM has become an area of concern due to the bycatch mortality of spawning bluefin tuna in the directed yellowfin tuna longline fishery. As a result there have been several management measures to mitigate the bycatch of bluefin , including the required use of weak hooks in 2011 and the implementation of Individual Bluefin Quotas (IBQs) in 2015. Research conducted by NOAA Fisheries in 2012 shows that setting longlines deeper than typically fished can reduce bluefin interactions with longline gear and likely increase the catch of targeted yellowfin tuna. During the study researchers deployed hook timer and temperature/depth recorders (TDRs) on the longline to determine when and at what depth yellowfin and bluefin become hooked on the longline. Researchers also deployed satellite (PSAT) tags on both yellowfin and bluefin to learn about water column utilization during the daylight period (the period when tuna are caught on longlines). TDR data showed that 70% of fishing effort occurred between 60 and 110m in depth (primary fishing zone). Results also showed a strong correlation between the proportion of tuna time spent in the primary fishing zone (from PSAT data) and CPUE. PSAT data also showed that bluefin spend a higher portion of daylight time in the primary fishing zone (near the thermocline) than do yellowfin. Results suggest that sets deployed greater than 110m have the potential to reduce the bluefin interactions while potentially increasing yellowfin catch. Research in other fisheries has also shown that deeper setting of longline gear also can reduce sea turtle bycatch. Based on these results we propose to conduct a demonstration project within the GoM pelagic longline fishery to contract vessels to make alternating sets between their normal fishing depth and sets at greater depth. If the indications from the previous research are accurate, fishers industry wide will be incentivized to fish PLL gear at greater depths due to the increase in yellowfin tuna catch. Results of the demonstration project will be decimated to the fishery through a series of workshops throughout the GoM longline fishery. The project will be monitored by observers on the project vessels. Dissemination of project results will prompt changes in general fishing practices GoM wide, which will be monitored through the mandatory observer program. Date Entered: May 17, 2017 Date Edited: May 18, 2017		Yes	No	No	No	No	Yes	No		No		$ 2,500,000.00	$ -	
	Research and Education	5707	8/1/2017	Baseline Survey of Gulf of Mexico Rod and Reel Fishing Gear Interactions with Protected Species	NOAA Project ID#13599: This project would gather baseline information necessary to inform future restoration to reduce lethal interactions between rod and reel fishing gear and protected species (i.e., sea turtles and marine mammals). The project would survey recreational anglers and for-hire vessels using rod and reel fishing gear in the Gulf of Mexico to determine the magnitude of protected species interactions with rod and reel gear. Fishing interactions between rod and reel gear and protected species are increasing in the Southeast. These interactions are problematic for both the anglers and the animals. For anglers, interactions may result in a decrease in catch, damage to gear, or frustration. For the animals, interactions cause an increased risk of death or serious injury from entanglement in or ingestion of gear, illegal retaliation from anglers, and changes in natural behaviors. For example, when a dolphin â€™s foraging behavior, and teaches it to associate anglers with food. NOAA seeks to reduce injury and mortality to sea turtles and marine mammals from interactions with rod and reel fishing gear by fully understanding the frequency, location, and nature of interactions in the Gulf of Mexico. In this study, we will conduct systematic surveys of anglers and for-hire boat captains/owners and their patrons that fish region-wide in all coastal Gulf states, including Texas, Louisiana, Mississippi, Alabama, and Florida. The survey sampling frame will be informed by Marine Recreational Information Program Fishing survey modes. Anglers and for-hire boat captains/owners and their patrons will be asked standardized questions to inform restoration efforts, such as where they have seen protected species while fishing, describe the animalsâ€™ observed behaviors, and share details about interactions. Data on rod and reel gear interactions with protected species are limited to a few research studies, strandings records, and anecdotal reports by fish ermen. Strategic data collection on rod and reel gear interactions is needed to fully understand the frequency, geographic extent, and mode of interaction between protected species and fishing gear. Understanding the impacts, as well as where and how often these interactions occur, is vital to informing restoration efforts to reduce and prevent such interactions for the benefit of anglers and protected species. Estimated costs for this project are ~150K/state survey. Assume one survey per state for a total cost of 750K to be conducted over a 3-5 year period. Date Entered: May 22, 2017		Yes	No	No	No	No	No	Yes		No		$ 750,000.00	$ -	

	Research and Education	5710	8/1/2017	Removal of derelict fishing gear around popular shore-fishing sites (piers and jetties)	NOAA Project ID#13569: Through this project, NOAA intends to recover submerged derelict/abandoned fishing gear from popular (and heavily used) shore-based fishing locations. Derelict gear, particular monofilament fishing line, that is accidentally or intentionally left in the environment by recreational fishers is a persistent threat to sea turtles. This is the most commonly documented marine debris found on stranded sea turtles in the GOM. This abandoned/lost fishing gear significantly contributes to entanglement of sea turtles and tends to accumulate around areas used for shoreline fishing. Project locations would be selected and prioritized based on intensity of use for recreational fishing, known co-location with sea turtles (e.g., foraging areas), and frequency of entanglement/ingestion-related strandings. This project could potentially also benefit marine mammals. This project could be scaled based on available funds. Estimated 75K/site. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	No		No		$ 225,000.00	$ -		
	Research and Education	5721	8/4/2017	DWH Long-term Planning Action Analysis: Ocean Use Mapping	NOAA Project ID#13615: Conduct participatory workshops with regional ocean experts to capture community perspectives about ocean space and to create maps of past and current ocean uses across three distinct sectors: non-consumptive, fishing and industrial/military. Develop GIS data, map and analytical products, and web-based interactive viewers to guide NRDA efforts. Benefits: 1. Provides critical information about ocean uses to help guide and prioritize future emergency response and cleanup activities in order to minimize impacts and injuries to users. 2. Captures wide range of community perspectives about ocean space (i.e. how it is used, governed and managed) to complement other mapping approaches designed to document physical ocean features/properties (e.g. species distribution, biodiversity indicators, ecosystem health) 3. Provides a more complete baseline of human uses for future oil spill assessments related to lost use compensation and restoration. 4. Provides a unique and comprehensive planning resource to identify, design, prioritize and evaluate restoration projects for the efficient use of recovered funds aimed at replacing lost uses and values. 5. Provides a long-term information resource to inform broader coastal planning and management priorities that take into account current and emerging ocean uses of the ecosystem, including investment in future recreational opportunities. 6. Provides, for the first time, a comprehensive linkage between ecosystem features, functions and services and the ocean uses they support. 7. Provides the baseline data to explore linkages between existing ocean uses and documented economic values of coastal activities. Products: 1. Spatial GIS data on each ocean use and sector. 2. Analytical products illustrating patterns in ocean use, including identification of existing ocean uses at risk from spills or response activities. 3. Interactive online viewer allowing remote visualization and analysis of GIS data. Desired Outcomes: strengthened and more efficient planning for emergency response, assessment and restoration. â—¯Interactive holistic mapping product utilizable by multiple planning agencies â—¯Useful mechanism for integration with existing resources â—¯Planning product utilizable across sectors and uses Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 3,000,000.00	$ -		
	Research and Education	5725	8/10/2017	Develop rapid response techniques and advanced technologies to enable rapid assessment of deep-sea coral community ecology.	NOAA Project ID#13547: Deep-sea sediment fauna (infauna) represent important components of benthic biodiversity, and provide essential ecosystem functions including sediment bioturbation, organic matter decomposition, and energy transfer. However, due to their sedentary lifestyles and low mobility, infauna are vulnerable to disturbance, including hydrocarbon contamination and organic enrichment. Impacts associated with contaminants from the DWH spill resulted in changes in infaunal composition, diversity, and abundance. While these data represent a useful baseline for tracking post-spill changes, the long-term response of these deep-sea communities remains unclear. Sediment community assessments have traditionally used taxonomic methods for identification of fauna and diversity estimation. However, these methods are time intensive. Recent advances in high throughput environmental sequencing have enabled assessment of a wide range of metazoan taxa present in deep-sea sediments using molecular methods. Environmental sequencing has been successfully used to assess biodiversity and genetic connectivity of deep-sea and coastal sediment communities, and characterize pre- and post-spill beach sites affected by heavy oiling during the DWH spill. Environmental sequencing may elucidate connectivity among GOM habitats, potentially identifying critical habitats for biodiversity maintenance, which is important for successful recovery of impacted communities. Comparison between DNA-based data sets and taxonomic results will provide quantitative metrics to ground-truth the utility of molecular analyses in future rapid assessments. This type of DNA-based method will be useful for understanding the effectiveness of restoration efforts by providing rapid quantification of infaunal community changes with disturbance, and potentially the identification of new indicator species for future disturbance events. Sediment cores will be collected adjacent to deep-sea corals (healthy and impacted sites) and sediment fractions will undergo standard meiofaunal extraction procedures for both taxonomic and environmental sequencing. Environmental DNA will be obtained from the extract, followed by amplification and sequencing on the Illumina MiSeq platform. This methodology has been extensively tested and validated for high-throughput environmental DNA sequencing. Processing and analysis of high-throughput data will be carried out using the appropriate software tools and bioinformatic workflows. Data collected will represent a combination of high-throughput sequencing methods and traditional taxonomic approaches, providing valuable information from which to track the recovery of impacted deep-sea coral infaunal communities, guide long-term monitoring programs of deep-sea environments, and help inform the development of future restoration plans. Samples collected will be processed for environmental analysis to provide a rapid assessment of sediment communities, to identify changes in their community structure, and to isolate species-specific responses to oil spills versus other types of disturbance. This research will provide the data required for impact assessments and to measure the success of mitigations developed through adaptive management for the protection of natural		Yes	No	No	No	No	Yes	Yes		No		$ 11,000,000.00	$ -		
	Research and Education	5728	8/10/2017	Documenting temporal change in deep-sea coral sediment community structure and function in order to track long-term responses to natural and anthropogenic disturbance and inform future restoration activities	NOAA Project ID#13555: Benthic fauna provide essential ecosystem services, including nutrient cycling, biomass production, and sediment bioturbation, and a loss of benthic biodiversity has been correlated with an exponential decline in ecosystem services. Sediment macro- and meiofauna (infauna) represent important indicators of natural and anthropogenic disturbance primarily due to their sedentary lifestyle and their rapid response to change; thus, examining these communities has proven useful in impact assessments of coastal and deep-sea communities. For example, in the wake of the DWH oil spill, immediate impacts were detected in benthic communities including sediments adjacent to deep-sea corals. Annual collections of sediment adjacent to the impacted corals are tracking changes in these communities with time since the spill (2010-2016). While long-term impacts to these habitats are unknown, recovery rates are predicted to be slow with DWH derived contaminants remaining in biologically active sediments for many years. Coral-associated sediments contain benthic communities that differ from other soft sediments in the GoM, and thus recovery trajectories at these locations may differ as well, making regional generalizations inaccurate. Without the knowledge of the natural trajectory for recovery of communities, we will be unable to apply remediation tactics to restore these habitats. This research will characterize infaunal community structure at several deep-sea coral sites. Sediment cores will be collected adjacent to corals to assess infaunal abundance, diversity, evenness, and composition in ecosystems affected by different stressors. Sediment also will be processed for total organic carbon and nitrogen, hydrocarbon and metal concentrations, particle size analyses and redox conditions. Similarities and differences in benthic communities will be examined using non-metric multidimensional scaling; pairwise comparisons will be made between sites in order to estimate the percent comm unity dissimilarity/similarity and the taxa responsible for differences among coral sites. RELATE and DISTLM multivariate statistics will be used to analyze and model the relationship between the infaunal assemblage data and the environmental variables. This work will provide traditional taxonomic data that is comparable to existing datasets available at impacted and non-impacted deep-sea coral sites, and regionally for northern GoM soft-sediments, and natural hydrocarbon seeps including the environmental parameters for these habitats. This work also links to proposed research examining the environmental sequencing of sediment communities entitled: Develop rapid response techniques and advanced technologies to enable rapid assessment of deep-sea coral community ecology (USGS-Demopoulos). These comparisons will quantify community changes since the spill, estimate resilience, and determine whether these systems have recovered to comparable community structures near healthy reference areas. Assessing the community composition and biodiversity at selected deep-sea coral sites will provide baseline data for community response to contaminant exposure and critical data for future restoration projects. The cost of this effort is directly related to the number of sites examined and		Yes	No	No	No	No	Yes	Yes		No		$ 10,000,000.00	$ -		
	Research and Education	5729	8/15/2017	Harrison County Sheriff's Department Training Academy	The Harrison County Sheriff's Department Training Academy is a full-service training academy that offers basic certification and advanced courses in communications, corrections and law enforcement. The academy is a collaborative partnership between the Harrison County Sheriff's Department and the Mississippi Gulf Coast Community College. The instructor pool of the Academy is comprised of practitioners; ensuring attendees receive real, practical training. The current pool of cadets come from the private and public sectors spread throughout the entire State of Mississippi. The Academy also trains self-sponsored cadets that were unemployed upon enrollment and hired by Law Enforcement Agencies upon completion of the program; the agencies that hired the trained cadets are also spread throughout the state. The Sheriff's Department is currently leasing the property and facility where the Training Academy is held and is at capacity. The Sheriff's Department is seeking funding in order to build a state of the art Training Academy that will allow them to become a premier destination for law enforcement training in the Southeastern United States.	Harrison	Yes	No	No	No	Yes	No	Yes	90	No		$ 5,000,000.00	$ -		

	Research and Education	5730	8/16/2017	40 Meters and Landward: Assessment, Monitoring, and Adaptive Management for Gulf of Mexico Coastal Ocean, Estuarine, and Riparian Habitat	NOAA Project ID#13558: This project uses novel satellite technology to provide classified habitat shoreward of approximately 40 meters water depth across the Gulf of Mexico. Because satellites pass over any location regularly, this unique project will create a time series of spatial habitat data thus allowing rapid identification of where and when change occurs. Such data are invaluable for effective, targeted restoration planning, project monitoring, and observing how the region responds to a variety of pressures. Many open ocean fish, invertebrates, marine mammals, and turtles injured during Deepwater are dependent on both nearshore and estuarine habitats. Indeed, central to many restoration planning discussions leading to the pDARP were the linkages between offshore and nearshore or estuarine habitats. This is because the most viable - and pragmatic - open ocean restoration often has a nearshore or estuarine focus. However, nearshore and estuarine habitats were also injured by the Deepwater Horizon oil spill and are further degraded by channelization, energy development, subsidence, and sea level rise. These processes will present challenges into the foreseeable future. Mitigating such losses - or even reversing them - would be most effectively achieved if one understands how and where change is most rapid. Advanced satellites now offer the capability to rapidly collect bathymetric and categorical habitat data to water depths as deep as forty meters. This capability means that broadscale maps of habitat and bathymetry covering large swaths of the continental shelves can be developed quickly and efficiently. Further, repeated satellite passes over any given area allows one to measure habitat and landform change through time. These techniques offer distinct advantages in coverage and speed over the piecemeal approaches deployed today that use aircraft, sidescan and multibeam sonars. The work will provide refined habitat data for the Gulf of Mexico, support improvements in circulati on models that all rely on bathymetric data, and offer a means to monitor change in critical habitat from 40 meters up into terrestrial environments across the Gulf of Mexico. This project will use recent developments in satellites and classification analyses to provide habitat-categorized maps of the coastal zone (inshore of the riparian out to a water depth of 40m depending on water quality). The satellite-derived timeseries of habitat data will be examined to identify those areas that are stable and those that are undergoing rapid change in elevation of habitat type. The information will be useful for states planning geoengineering, restoration personnel preparing for marsh and seagrass projects, and biologists interested in the habitats of fishes, cetaceans, and turtles. Date Entered: May 22,2017		Yes	No	No	No	No	Yes	No		No		$ 5,000,000.00	$ -		
	Research and Education	5734	8/16/2017	Dolphin Conservation Mobile Education/ Outreach Exhibit	NOAA Project ID#13570: This project involves developing a mobile outreach and education exhibit that would travel throughout the Gulf States to educate residents and visitors about dolphin conservation issues. The audience includes recreational fisherman, beach-goers, motorized and non-motorized recreational vessel operators, and the general public. By educating these audiences and distributing outreach materials at fishing piers, marinas, and events, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats because this audience would know how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. A large van would be purchased and wrapped with colorful, eye catching dolphin graphics and bold educational messages. Not only would this attract people during outreach but the wrap would also serve as a rolling billboard that has the potential to reach thousands when traveling throughout the Gulf States. The inside of the van would be a customized exhibit illustrating and educating audiences about the topics above. The budget includes funds to purchase and customize the vehicle, as well as funds for salary of an educator/driver, fuel, per diem (food/lodging), outreach materials, and insurance & maintenance of the vehicle for at least 3 years. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 500,000.00	$ -		
	Research and Education	5737	8/16/2017	Printing and Distribution of Marine Mammal Conservation Outreach Materials & Signs	NOAA Project ID#13572: Partners currently assist NOAA Fisheries with the distribution of dolphin conservation outreach materials and signs installation throughout the Gulf States. While these efforts are appreciated, outreach is inconsistent and often opportunistic; therefore lacking in many areas. This project would fund a full-time educator (2 years) to implement a thorough distribution plan and coordinate the installation of 800 dolphin conservation signs throughout Texas, Louisiana, Mississippi, Alabama, and Florida. The educator would document all distribution efforts and plot the installation of all signs on a map. By distributing outreach materials at fishing piers, marinas, businesses, tourism & education centers and at events, and by installing signs on waterways, piers, docks, and in marinas, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats by informing audiences about how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. Outreach materials include: (pdf of these materials: http://sero.nmfs.noaa.gov/protected_resou rces/outreach_and_education/index.html) - Protect Dolphins brochures - Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines brochures - Marine Mammal Viewing Guidelines/ How to Help a Stranded Marine Mammal cards - Dolphin Viewing Guidelines stickers - How Can You Help a Stranded Marine Mammal? Southeast U.S. Marine Mammal Stranding Network brochures - Dolphin & Whale 911 App/ SEE & ID Dolphins & Whales App cards - Dolphin Friendly Fishing and Viewing Tips/ Donâ€™t Feed Wild Dolphins cards - Cast with Care cards and stickers Signs include: (pdfs of these signs: http://sero.nmfs.noaa.gov/protected_resources/section_7/protected_species_educational_signs/index.html) - Save Sea Turtles and Dolphins - Help Stranded Marine Mammals - Protect Wild Dolphin (Harassment) - Donâ€™t Feed Wild Dolphins - Dolphin Friendly Fishing Tips Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 275,000.00	$ -		
	Research and Education	5745	8/17/2017	Broad Scale Aerial Survey to Monitor Sea Turtle Trends in the Gulf of Mexico	NOAA Project ID#13607: This project would entail broad-scale aerial surveys of the Gulf of Mexico to monitor long-term trends in abundance of large juvenile and adult loggerheads, Kempâ€™s ridleys, and leatherback turtles. The survey would incorporate recommended survey design/methodologies from the recently convened NOAA in-water workshop. Survey methodologies would be specifically designed and implemented to ensure a robust sample design that would yield long-term trend data. This project would contribute to establishing statistically rigorous and biologically meaningful baseline abundance data and would allow for long-term monitoring of trends in abundance over time. The project would be part of a broader in-water monitoring program and would provide information not only on trends in abundance, but on distribution to help inform restoration planning and monitoring. The cost is estimated as 1M/survey year, total costs will be dependent of survey design and survey frequency. For purposes of this submission, three survey years are initially anticipated. This project could also benefit marine mammals. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	No		No		$ 3,000,000.00	$ -		

	Research and Education	5751	10/19/2017	USM Ocean Engineering and Unmanned Maritime Systems at the Port of Gulfport	Statement of Need: The State of Mississippi has made extraordinary investments in its marine science and education enterprise around the Port of Gulfport. The acquisition of the research vessel Point Sur was possible with support at the Port, and future growth of the maritime â€¯Blueâ€™ Economy will be fostered by academic research and education activities at the Port. The investments will yield results in economic and workforce development and emerging Unmanned Maritime Systems used by the US Navy, other federal agencies and industry. Statement of Work: The USM Port of Gulfport Marine Research Facility will be completed in Spring 2018, and the funds will be used to purchase state-of-the-art fabrication and engineering equipment, information and teaching technologies, building furnishings and ship support equipment. The building is constructed by Mississippi State Port Authority, and USm is entering into a long-term Lease Agreement to occupy the building. USM must provide all furnishings, information technology, research vessel support equipment and engineering/fabrication equipment. Detailed items for acquire will be submitted, but a general breakdown is provided here. Financial Request: Engineering/fabrication equipment ($1,170,000) Transport vehicles/lifting capacity ($500,000) Warehousing infrastructure ($100,000) Facility staff machinist start up ($200,000) Small boats shop ($75,000) Furnishings ($130,000) Information/teaching technology ($225,000) Total Request: $2,400,000	Harrison	Yes	No	No	No	Yes	No	Yes	50	Yes		$ 2,400,000.00	$ -		
	Research and Education	5760	1/24/2018	Understanding the cause of spontaneous abortions in cetaceans after DWH	NOAA Project ID# 13392: The proposed project seeks to better understand the physiological mechanism that resulted in spontaneous abortions of small cetaceans after the Deep Water Horizon event. The project will require access to archived tissues from stranded cetaceans. The lab analyses will include analysis of disease causing pathogens as well as baseline measurements of the endocrine and body composition of the stranded specimens. Date Entered: 5/15/2017		Yes	No	No	No	No	No	No		No		$ 300,000.00	$ -		
	Research and Education	5763	2/19/2018	Unmanned Maritime Systems Technology Program	Mississippi Gulf Coast Community College (MGCCC) seeks to work with interested partners in the development and implementation of an Unmanned Maritime Systems Technology Program to support businesses and industries that directly support the unique environmental and ecosystem structures of the coastal geography and the Northern Gulf of Mexico. The program will be located in Jackson County, Mississippi on the Jackson County Campus (JC) of MGCCC and will complement the existing career and technical programs on campus, a thriving local maritime industry, and a growing scientific community. The proposal herein will not be static and will be informed by and updated as directed by current coastal efforts associated with unmanned maritime systems, inclusive of the work of the Governorâ€™s Ocean Task Force. MGCCCâ€™s Unmanned Maritime Systems Technology Program will be a technical education program that will provide students with the opportunity to become employed in a growing industry. Information provided by the Duke Center on Globalization, Governance and Competitiveness indicates that the industry is a $156.9 million-dollar industry that is growing at a rate of 13.8% annually. The program will contain classroom, lab based, and field-based instruction and will seek out industry and university partnerships in support of the program. Courses will focus on systems IT, systems maintenance, systems operations, systems security, systems manufacturing, systems usage, troubleshooting, and the industry in general. The program location will be on the collegeâ€™s Jackson County Campus (JC). The campus is located in Gautier, Mississippi; logistically accessible from both Interstate 10 and Highway 90. The location makes it feasible for on-site programs to serve Mississippiâ€™s coast and the region beyond. Programmatically, the campus is home to academic transfer programs, workforce training programs, career, and technical programs. Programs such as programs in electronics, instrumentation and controls, systems-based electronics, and automation are complimentary programs to an Unmanned Maritime Systems Technology program. Additionally, JC is home to the collegeâ€™s Estuarine Education Center (EEC); a 40+ acre development along Mary Walker Bayou which grants water access to the Pascagoula River, the accompanying estuary systems and the Gulf of Mexico. Within the EEC are facilities offering classrooms, science labs, and industrial facilities that can/will house equipment for the operation of an Unmanned Systems program. The timeframe for development and sustainability attainment will be a period of 5 years, with year one being the development period and years 2 â€“ 5 being instructional years. It is anticipated that at the end of the 5-year period that the program will be	Jackson	Yes	No	No	No	Yes	No	No		Yes		$ 4,663,914.00	$ -		
	Research and Education	5766	2/25/2018	Reef Fish Community Permit/ Quota Bank	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Reef Fish Community Permit/ Quota Bank. Mississippi is the most under served state in the commercial Gulf reef fish fishery. Mississippi has the least amount of Gulf reef fish permit holders and individual fishing quota shareholders. This project would help to increase commercial access to reef fish species such as red snapper; a variety of groupers; a variety of tilefish; and various other fish species that require a federal Gulf reef fish permit to harvest commercially. This program would also help to reduce dead discards in the reef fish fishery by providing the needed quota to harvest fish that would otherwise have to be discarded at sea. This project would greatly benefit Mississippiâ€™s coastal economy by increasing access and landings for several species of reef fish. Mississippi's commercial fishermen, seafood dealers, seafood markets, and restaurants would all benefit from this project. Similar programs have been implemented across the Nation to provide community protections for limited access commercial fisheries. Visit www.catchinvest.com to learn more about permit and quota banks work. The need to diversify the income of seafood industry members is greatly needed due to the severe decline in revenues generated from the local oyster and shrimp industry following the BP oil spill.	Hancock, Stone,Jackson,Pearl River,George	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 1,000,000.00	########		
	Research and Education	5769	2/25/2018	Sea Turtle Conservation and Shrimp Trawl Vessel Electronic Monitoring Program	The Mississippi Commercial Fisheries United, Inc. proposes funding for a Sea Turtle Conservation and Mississippi Shrimp Trawl Vessel Electronic Monitoring Program. This program would initially target skimmer trawl shrimping vessels that are currently not required to use Turtle Excluder Devices (TEDs) but must adhere to tow time regulations that limit the length of the tow times to 55 minutes or 75 minutes depending on the time of the year. A pending NOAA rule has been promulgated that would require skimmer trawl vessels to use TEDs has stalled. Therefore, this program proposes a viable alternative to the use of TEDs in skimmer trawls. This program proposes funding to establish a voluntary incentive based program for Mississippi shrimpers to implement and use electronic data loggers in the cod end of shrimp nets. This data logger is water resistant and records water level data to determine when a net is submerged in water and for how long. This data would give an accurate representation of shrimp vessels adherence to tow times. These data logging units can transmit the recorded data via Bluetooth technology or be downloaded through hard wire. This data could be used to help inform compliance with tow time regulations and provide a viable alternative to the use of Turtle Excluder Devices. This technology could also be used in any type of shrimp trawl to help document effort and tow times in the shrimp fishery. This technology could also help provide verifiable data to provide shrimp buyers with tow time data to ensure quality production and add-value to domestically harvested shrimp. This program can also help the shrimp industry to obtain sustainability certification by verifying compliance with regulations that minimize lethal interactions with sea turtles.	Hancock,Jackson,Harrison	Yes	Yes	Yes	No	No	Yes	Yes		Yes		$ 750,000.00	########		

	Research and Education	5771	2/25/2018	Shrimp Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Shrimp Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the shrimp industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a shrimp industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfill the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the shrimp industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 250,000.00	$ -	
	Research and Education	5772	2/25/2018	Fin-fish Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Fin-fish Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the fin-fish industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a fin-fish industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This task force would include representation from the recreational, commercial, and for-hire sectors that are engaged in the harvest of fin-fish species including but not limited to speckled trout, red fish, flounder, menhaden, reef fish, and tuna. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfill the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the fin-fish fishing industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 250,000.00	$ -	
	Research and Education	5773	2/25/2018	Oyster Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Oyster Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the oyster industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have an oyster industry task force. The Governorâ€™s oyster task force formed in 2014 but no longer convenes due to a lack of funding. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfill the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the oyster industry and local community.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ 250,000.00	$ -	
	Research and Education	5795	7/20/2018	Urban Natural Resource Job Training	The MS Urban Forest Council developed a project in 1995 with EPA, creating a program to help people learn about careers in the green industry and provide job training opportunities in regard to natural resources such as landscaping, trees, food plants, growing food, land maintenance, cut flowers, and other "green jobs." The program was called 'Ribbons of Green Career and Job Training.' We are proposing this project to assist in restoring the MS Gulf Coast from injury of natural resources but also to provided valuable job training and career development. Many people are not aware of the many opportunities working with natural resources. Natural Resource Job Training and Small Business Incubator The project will include job training in the classroom and training on sites. Site for training will be identified based on topic of training, location of participants and relative to the topics. This community garden and farming space is the perfect location for a job training and small business incubator center. Not only will this project provide real-time economic opportunities to the trainees; it will also help develop and revive the surrounding communities, while rebuilding and growing the green industry along the MS Gulf coast. This project would create training programs that satisfy needs of employers in the state. The following programs would be implemented: Job training and certification as a trained individual would be provided for each of these topics. Individuals participating will complete the whole training program. Trainers will provided assistance in obtaining jobs in these areas of service or be trained to develop their own company to provide these service areas. 1. Farming-Food, vegetable, fruit and herb production a. Vegetable growing and harvesting b. Nursery training (growing seedlings & fruit tree propagation)		Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ 323,000.00	########	
	Research and Education	5803	8/10/2018	Establishment of a Coastwide Reference Monitoring System (CRMS) in Mississippi	NOAA Project ID# 13891: Expansion of a Coastwide Reference Monitoring System (CRMS) wetland observation network into Mississippi to inform wetland restoration success and also assist with Trustee ecosystem restoration quantification. The proposed project would build off of the existing CRMS wetland monitoring system being implemented in Louisiana. In Louisiana CRMS was designed to monitor the effectiveness of restoration actions at multiple spatial scales from individual project sites and the influence of these projects throughout the coastal zone. The LA CRMS design includes sites for swamp habitats along with fresh intermediate, brackish and salt marshes. This project could be implemented for swamp and marsh or only marsh if needed depending on the need. The following data types are proposed record land change, hydrologic, soils and vegetation including aerial imagery, accretion and surface elevation, vegetation, soil porewater salinty, soil properties, hydrographic. Additional activities such as data management and visualization, data analysis, report cards would be built into to the project as necessary and appropriate. This project would aim to build off of and leverage existing efforts in the State of Mississippi where possible. NOAA Project ID# 13891 Date: Aug 7, 2018		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	5804	8/10/2018	Long Beach Harbor Enhancements	NOAA Project ID#13889: The Long Beach Harbor serves mainly recreational boaters. However, that recreational use is the basis for a robust business community that serves tourists, fishermen, boat owners, restaurant diners, and pedestrians. The Harbor has been repeatedly damaged by natural (Hurricane Katrina) and man-made (BP Oil Spill) disasters. The natural disasters have destroyed and damaged the harbors channel, breakwaters, and support infrastructure (gas lines, power, etc.). The BP Oil Spill damaged many boats docked in the harbor and made tenants less likely to dock in the harbor. These direct impacts drove away the secondary commercial businesses that relied on the port such as fuel docks, bait shops, restaurants, etc. Date: Aug 7, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 60,000,000.00	$ -	

	Research and Education	5808	8/10/2018	Quantifying water availability and quality from submarine discharge points into Gulf estuaries	NOAA Project ID# 13883: As resource managers continue to understand the effects of water availability and quality from freshwater systems that drain to Gulf estuaries and bays, one source that is typically unaccounted for comes from submarine outcrops from near-shore aquifers. The USGS has recently updated the Coastal Lowlands Aquifer System (CLAS) groundwater model which can be used to estimate groundwater flow and quantify estimates of water quality/nutrient loads from submarine discharges. Specifically, this project will utilize the updated CLAS model to address groundwater and groundwater/surface-water issues along the Gulf coast to: 1. develop an approximate water budget of groundwater flow to/from the coast; 2. evaluate subsidence related to groundwater withdrawals; 3. evaluate changes in groundwater withdrawals and effects on water budget and water levels which can be used to evaluate scenarios related to increases in GW withdrawals for public-supply, industrial, and irrigation water use; 4. evaluate potential saltwater intrusion; and 5. use groundwater flow quantities and water chemistry data to estimate nutrient loads into Gulf estuaries from submarine waters sources (which can then provide a better understanding of Harmful Algal Boom hotspots across the Gulf). This project could leverage an existing project by the University of Southern Mississippi that is already underway funded by a grant from the Mississippi Water Resources Institute that focuses on identification of groundwater seeps within the Mississippi Sound. Also, this project is indirectly related to priorities of the Water Resources Priority Issues Team of the Gulf of Mexico Alliance to better understand occurrence and distribution of HAB outbreaks in nearshore areas around the Gulf. Date: Aug 6, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 3,000,000.00	$ -	
	Research and Education	5809	8/10/2018	Development of a Decision Support System to address management of nutrient and sediment loads entering bays and estuaries from Gulf watersheds.	NOAA Project ID# 13877: This project will build an online Decision Support System (DSS) that will allow managers to run scenarios by altering identified sources of nutrients or sediment within Gulf watersheds to see the downstream effects of those scenarios on nutrient and sediment loads entering bays and estuaries across the Gulf. The DSS will be based on development of Total Nitrogen, Total Phosphorus, and Suspended Sediment Spatially-Referenced Regressions on Watershed Attributes (SPARROW) models for the entire Gulf. In addition, display of model results in the DSS can help managers target watershed areas with high nutrient loads to better locate Best Management Practice implementation. Nutrient load estimates from the models entering bays and estuaries can also be used as nutrient inputs to available hydrodynamic models to identify potential hot spots across the Gulf for Harmful Algal Bloom outbreaks. Sediment models can help locate hot spot areas for high sediment loads within Gulf watersheds, which could be important to manage wetland restoration. Date Aug 1, 2018		Yes	No	No	No	No	Yes	Yes		No		$ 4,000,000.00	$ -	
	Research and Education	5812	8/10/2018	Groundwater-neutral strategies to create habitat for migratory shorebirds on private lands of the Mississippi Delta	NOAA Project ID# 13868Summary of rationale and proposed project: Nearly half of North American shorebird species (such as sandpipers and plovers) are declining, and a key factor in these declines is a loss of available habitat for migration stopover, especially in fall (July-October) when such habitat is more limited. To mitigate the impact of the Deepwater Horizon oil spill on this group of birds, we need high-quality stopover habitat for them not just on the immediate Gulf Coast, but also away from the Gulf Coast, in the MS Delta. Private lands, including aquaculture farms and former aquaculture farms being managed for duck hunting, and also active agricultural fields, can provide high-quality stopover habitat for migratory shorebirds. Groundwater is an increasingly valuable and limited resource in the MS Delta, so groundwater-neutral strategies for such wildlife habitat creation are needed. We will work with private landowners to provide high-quality, groundwater-neutral stopover habitat for migratory shorebirds in the MS Delta. Goal 1: Create 600 hectares of fall habitat for migrating shorebirds on private lands in the MS Delta, which has been estimated to be necessary to support the number of birds typically migrating through our region. Goal 2: Demonstrate the viability of ground-water neutral strategies for creating shorebird habitat, including use of surface water sources, lateral pumping, water storage, and drop-fill pumping strategies. Goal 3: Engage a diverse suite of private landowners and establish the desire for long-term voluntary implementation of these practices. Estimated Cost: $200,000 per year We have begun to build towards these goals by developing a network of partnerships with farmers and waterfowl enthusiasts throughout the Mississippi Delta, helping to assure the provision of substantial acreage of high-quality habitat for migratory shorebirds. During each of the fall 2016 and 2017 shorebird migrations, for example, we worked with landowners to create ap proximately 40 hectares (~100 acres) of habitat. Our on-the-ground surveys allowed us to estimate that this habitat was used each year by upwards of 10,000 migratory shorebirds, plus hundreds of wading birds, including herons, egrets, Wood Storks, and Roseate Spoonbills. In addition, we are currently pioneering a unique ground-water neutral strategy to create fall migratory shorebird habitat on a 67-acre crop field by pumping stored water from surface-water retention reservoirs, working with a corn farmer in Sunflower County, Mississippi. Our long-term goal is to assure that the entire 600-hectare target is met through provision of habitat via such partnerships with private landowners in the Mississippi Delta. July 11,2018		Yes	No	No	No	No	Yes	No		No		$ 200,000.00	########	
	Research and Education	5815	8/10/2018	RESTORE Gulf-wide stream flow study Mississippi Component - add the Pearl River to the existing project.	There is an approved RESTORE Act-funded Gulf-wide river flow study that will use a Mississippi coastal plain stream as a study site. It is currently being planned by the USGS Gulf Water Science Center in Nashville, with Rodney Knight as the principal investigator. This study needs to either focus on the Pearl River or model both the Pearl and the Pascagoula rivers with the OASIS modeling program for regulated rivers. The following three questions have been posed for investigation using OASIS, a powerful modeling framework: 1) How far downstream can a dam's disruption to flow be detected? 2) How sensitive are the fresh water needs of the estuary to upstream damming? 3) Can the coastal waters be so distant from a dam's influence on the river that it can't be detected? With the current plans to add more low head dams/weirs and a new impoundment on the Pearl River in Jackson, Ms in the name of flood control, these three questions need to be answered for the Pearl before more structures are placed on it. If the best river scientists in the U.S. cannot answer these questions about the Pearl River, further damming is not justifiable. In a phone conversation with the USGS principal investigator, he said that there is no reason both rivers could not be investigated. The environmental data set on the Pascagoula may be a bit better than that of the Pearl, but beyond this and affordability under the budget, there isn't a reason that OASIS couldn't be developed and run for the Pearl River.It is basically a matter of hiring Hydrologics Inc. to develop the program and sponsor a team of USGS scientists to apply it. Given the importance of the Pearl River to downstream Parishes and Counties, to the seafood industry of two states, to NASA and the Navy river warfare teams that practice in the Pearl, this research is needed for the Pearl River.	Rankin, Hinds, Copiah, Simpson, Lawrence , Marion, Pearl River, Hancockt Tammany ,Hancock	Yes	No	No	No	No	Yes	No		No		$ 3.00	$ -	

	Research and Education	5816	8/10/2018	Bottlenose Dolphin Health Assessments to Monitor Restoration Effectiveness in Mississippi	Health assessments are used to identify and understand population stressors, mitigate their effects, or plan more effective conservation measures, in response to management drivers (e.g., MMPA, ESA, NOAA's Ocean and Human Health initiative, and, more recently, for Natural Resource Damage Assessments â€“ NRDAs). Capture–release health assessments involve large teams of researchers using multiple vessels to locate, capture, assess, and release wild bottlenose dolphins. A large net is used to encircle one or more dolphins in shallow water. The team then enters the water and once the dolphin is disentangled from the net and restrained, blood is collected and vital signs are assessed. The dolphin is then brought up onto a specially designed platform on a boat for further examination and the collection of morphometrics, diagnostics, and biological samples. Samples are processed on the boat for timeliness and quality control purposes. Standard morphometrics and diagnostics include a physical exam, body measurements (length and girth), ultrasound to assess reproductive status and blubbler thickness, complete blood count (CBC)/blood chemistry/blood gases, serology, pathogens, endocrinology, immunology, urinalysis, skin and oral assessment, biotoxin and contaminant measures, and blowhole and genital swabs. Most of these diagnostics can only be obtained from wild dolphins through capture and brief restraint. Health assessments conducted on bottlenose dolphins in the Southeast have used standardized protocols and established laboratories for sample analysis. The pooling of available samples has resulted in the establishment of reference intervals for many health parameters, such as CBC, serum chemistry, mass:length ratio, and also baseline levels for biotoxins, persistent organic pollutants (POPs) including polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and a suite of organochlorine pesticides. Health assessments have been conducted on bottlenose dolphin populations in various locations in the Gulf, including Sarasota Bay, Florida (1987–Present), Mississippi Sound, Mississippi (1982-83, 2013, 2018), Matagorda Bay, Texas (1992), St. Joseph Bay, Florida (2005–06), and Barataria Bay, Louisiana (2011, 2013, 2014, 2017, 2018). Health assessments conducted in Barataria Bay, Mississippi Sound, and Sarasota Bay were instrumental in quantifying injury associated with the Deepwater Horizon oil spill.		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5817	8/10/2018	Bottlenose Dolphin Photo-Identification Studies to Monitor Restoration Effectiveness in Mississippi	Photo-identification studies are a type of capture-mark-recapture study used to detect known (marked) and unknown individuals over time to estimate population size and vital rates. They are also used to provide information on distribution, seasonal movements, habitat use, behavior, and body condition and health of individuals. Information gained from multi-year photo-identification studies would be an indicator of the effectiveness of efforts to restore bottlenose dolphin populations in waters most heavily impacted by the Deepwater Horizon oil spill, including Barataria Bay, Mississippi Delta, Mississippi Sound, and adjacent coastal waters. Centralized large-scale, collaborative photo-identification catalogs for bottlenose dolphins and other species have been established (e.g., the Gulf of Mexico Dolphin Identification System, or GoMDIS), providing a basis for tracking movements of individual animals beyond project study sites and detecting range shifts in response to environmental changes. Existing data systems need to be assessed, refined, and expanded to facilitate upload and analysis of a large number images and to improve data access and sharing by a diverse group of field researchers and partner organizations in Mississippi and throughout the Gulf to better determine connectivity and movements of bottlenose dolphins within and between adjacent water bodies. Periodic workshops are needed to ensure standardized methods for image acquisition and processing are being used and revised as necessary. Multi-year studies need to be expanded to include additional study areas in Mississippi and across the Gulf, particularly coastal and offshore areas affected by the oil spill. Further research is needed on: (1) the development of software to enable more effective and timely analysis and comparison of still and video images, (2) the potential for high-resolution aerial imaging systems to augment or replace traditional aerial and/or vessel surveys, and (3) the use of unoccupied aircraft systems (UASs) or drones to collect images of marine mammals independently or during traditional vessel surveys or other surveillance operations. Budget is variable depending on the frequency of assessments and the duration of the project. Studies are most informative for assessing recovery of these long-lived species if conducted annually for a minimum of 10-15 years. Entities capable of conducting such studies, or that have successfully conducted such studies in other areas of the Gulf, include the the National Marine Fisheries Service Pascagoula Laboratory, the National Ocean Service Charleston Laboratory, academic institutions (e.g., the University of Houston, Eckerd College, University of Southern Mississippi, University of South Florida,		Yes	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5821	8/10/2018	Addressing Harmful Human-Dolphin Interactions in Mississippi through Research, Education, and Enforcement	Nearshore and coastal habitats throughout the Gulf of Mexico are adjacent to areas of high human population. The high degree of overlap with human activities results in concern for both bottlenose dolphins that were also affected by the Deepwater Horizon oil spill. There are documented impacts on bottlenose dolphins from recreational fishing, boating, and tourism, including mortalities, injuries and harassment/disturbance. Harmful interactions between people and dolphins have been documented throughout the Gulf of Mexico, including in Mississippi coastal waters. Such interactions can be damaging to the dolphins by altering their natural behavior, and can put both humans and dolphins at risk of illness, injury, and death. The large variety of user groups and stakeholders and multiple management jurisdictions involved in such interactions requires a coordinated effort among state and federal biologists, managers, and enforcement agencies. Human activities of concern for bottlenose dolphins include– -Recreational fisheries - Interactions stem from entanglement in or ingestion of active or discarded fishing gear, depredation on bait or catch, scavenging of released fish, habitat degradation, and provisioning of animals. They can also stem from retaliation or lethal deterrence by fishermen for depredation on bait or catch. Acute and chronic impacts include altered behavior, decreased nutritional status, injury, and mortality. -Tourism and recreational activities - Interactions occur with recreational boaters, jet skis, dolphin and whale watching tour boats (particularly those operating irresponsibly by touching, feeding, swimming with, or harassing animals), and include boat strikes, disruption of natural behaviors, changes in group composition, association of people/boats with food if provisioning occurs, and conditioning. Long-term avoidance of high-use areas can lead to localized declines in abundance or shifts in habitat use to sub-optimal habitat. Acute and chronic impacts include altered behavior, decreased nutritional status and growth rate, injury, and mortality. Prevention of human-dolphin interactions is key, and is based on an understanding of how and why interactions occur. Targeted research on human attitudes towards dolphins coupled with long-term, year-round behavioral studies and data from stranded animals can help provide a more complete picture of causes of interactions, interaction rates, trends over time, and potential mitigation strategies. Studies conducted to data have identified mitigation strategies that have shown some effectiveness at		Yes	No	No	No	No	Yes	No		No		$ -	$ -	

	Research and Education	5823	8/10/2018	Reducing Bycatch of Bottlenose Dolphins in Mississippi Commercial and Recreational Fisheries	Marine mammal bycatch refers to any marine mammal adversely affected as a result of being unintentionally entangled, entrapped, ensnared, or caught by nets, lines, traps, or hooks, or otherwise impacted by fishing gear. Bycatch is the greatest direct cause of marine mammal injury and death in the United States and around the world. Reducing marine mammal bycatch in Gulf of Mexico commercial and recreational fisheries is one of the strategies identified by the Natural Resource Damage Assessment Trustees to restore marine mammals injured as a result of the Deepwater Horizon oil spill. Marine mammals injured by the spill and/or response activities in the Gulf include bottlenose dolphins (all stocks), Atlantic spotted dolphins, Brydeâ€™s whales, pantropical spotted dolphins, pygmy sperm whales, Risso's dolphins, and short-finned pilot whales. Observer coverage to document and quantify fisheries interactions with marine mammals is limited, but based on best available information, the National Marine Fisheries Service (NMFS) has identified the following Gulf of Mexico fisheries as having frequent or occasional bycatch of marine mammals: shrimp trawl, menhaden purse seine, coastal gillnet, pelagic longline, trap/pot, and charter boat/headboat fisheries. There are also documented interactions between bottlenose dolphins and recreational hook-and-line fisheries. Reducing bycatch in commercial and recreational fisheries operating in and adjacent to Mississippi state waters can aid directly in the restoration of bottlenose dolphins and other marine mammal stocks injured by the oil spill. Effort is needed in the following areas: -Increased levels of observer coverage on the above-mentioned fisheries/gear types/target species (particularly the shrimp trawl and gillnet fisheries) to provide better estimates of marine mammals injured or killed incidental to commercial fishing activities. Expanded observer coverage would also provide additional information needed by managers to determine factors associated with bycatch, such as gear type, time of day, bait type, fishing methods, areas fished, etc., and to identify, test, and implement measures to reduce bycatch. -Research and field studies to identify and test alternative observation methods that could be used to supplement or replace traditional human observers. Such methods may include, but are not limited to, the use of: remote observation platforms, underwater cameras, electronic monitoring, and unoccupied aircraft sysytems (UASs).		Yes	No	No	No	No	No	No		No		$ -	$ -	
	Research and Education	5825	8/10/2018	Expand and Improve Marine Mammal Stranding Response and Monitoring Capabilities in Mississippi	This project requests sufficient long-term resources for the designated Marine Mammal Health and Stranding Response Program (MMHSRP) network member in Mississippi to monitor the effectiveness of restoration efforts through enhanced surveillance, response, investigation, and, where possible, recovery and rehabilitation of stranded marine mammals from populations in Mississippi nearshore and offshore waters that were directly impacted by the Deepwater Horizon (DWH) oil spill. Nearly every population of marine mammals that inhabits the nearshore and offshore waters of Mississippi suffered quantifiable injuries due to the Deepwater Horizon oil spill. Response to both live and dead stranded marine mammals and the collection of biological information from these animals is critical to obtaining an understanding of natural and human-caused factors that are either contributing to or impeding the restoration of DWH-impacted populations. The MMHSRP network member that has been designated by the National Marine Fisheries Service (NMFS) to conduct stranding response activities in Mississippi, in accordance with the requirements of the Marine Mammal Protection Act, is the Institute for Marine Mammal Studies (IMMS) in Gulfport, MS. IMMS has several highly-trained and experienced stranding responders on-staff, with access to technicians, veterinarians, pathologists, and other specialists as needed to provide effective medical and forensic response during and after a stranding event. Prior to the spill, stranding response efforts were patchy and inconsistent in many portions of the Gulf region. Response capabilities increased during the spill with funding from the Natural Resource Damage Assessment (NRDA) and IMMS was instrumental in ensuring timely response and collection of biological samples from animals in Mississippi and Alabama. However, long-term, consistent funding is needed in Mississippi and across the Gulf to monitor the effectiveness of NRDA-directed restoration efforts and to provide an ongoing assessment of injuries that may continue to be associated with oil spill response or restoration activities. Institutional funding is variable but generally inadequate to provide the level of response needed. Limited expertise throughout the Gulf in marine mammal response, investigation, forensics, veterinary care, and rehabilitation underscores the need to secure resources needed to retain and recruit properly trained specialists to ensure consistent stranding response capabilities. Stranding response complements on-water observational studies of free-swimming wild animals, which provide a means to measure population vitality, births, juvenile survival, visual health indicators, and incidences of injury or harassment by human activities (e.g., vessel strikes and fisheries interactions).		Yes	No	No	No	No	Yes	No		No		$ 10.00	$ -	
	Research and Education	5830	8/10/2018	Bottlenose Dolphin Health Assessments to Monitor Restoration Effectiveness in Mississippi	Health assessments are used to identify and understand population stressors, mitigate their effects, or plan more effective conservation measures, in response to management drivers (e.g., MMPA, ESA, NOAA's Ocean and Human Health initiative, and, more recently, for Natural Resource Damage Assessments â€¦NRDAs). Capture–release health assessments involve large teams of researchers using multiple vessels to locate, capture, assess, and release wild bottlenose dolphins. A large net is used to encircle one or more dolphins in shallow water. The team then enters the water and once the dolphin is disentangled from the net and restrained, blood is collected and vital signs are assessed. The dolphin is then brought up onto a specially designed platform on a boat for further examination and the collection of morphometrics, diagnostics, and biological samples. Samples are processed on the boat for timeliness and quality control purposes. Standard morphometrics and diagnostics include a physical exam, body measurements (length and girth), ultrasound to assess reproductive status and blubbler thickness, complete blood count (CBC)/blood chemistry/blood gases, serology, pathogens, endocrinology, immunology, urinalysis, skin and oral assessment, biotoxin and contaminant measures, and blowhole and genital swabs. Most of these diagnostics can only be obtained from wild dolphins through capture and brief restraint. Health assessments conducted on bottlenose dolphins in the Southeast have used standardized protocols and established laboratories for sample analysis. The pooling of available samples has resulted in the establishment of reference intervals for many health parameters, such as CBC, serum chemistry, mass:length ratio, and also baseline levels for biotoxins, persistent organic pollutants (POPs) including polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), and a suite of organochlorine pesticides. Health assessments have been conducted on bottlenose dolphin populations in various locations in the Gulf, including Sarasota Bay, Florida (1987–present), Mississippi Sound, Mississippi (1982–83, 2013, 2018), Matagorda Bay, Texas (1992), St. Joseph Bay, Florida (2005–06), and Barataria Bay, Louisiana (2011, 2013, 2014, 2017, 2018). Health assessments conducted in Barataria Bay, Mississippi Sound, and Sarasota Bay were instrumental in quantifying injury associated with the Deepwater Horizon oil spill.		Yes	No	No	No	No	Yes	No		No		$ -	$ -	

	Research and Education	5832	8/10/2018	A comprehensive, participatory approach to enhance conservation of marine mammals and sea turtles and the sustainability of the shrimp fishery	Introduction: The shrimp fishery is the most valuable commercial fishery in the Gulf of Mexico with major cultural and economic impact on coastal communities. Several factors (e.g., fuel prices, shrimp imports, hurricanes, DWH spill) have impacted the viability of the shrimp fishery. Demand for sustainably produced seafood is increasing in the U.S. and greatly affects the market value of seafood. A common method to evaluate fisheries sustainability is the magnitude of the bycatch of marine mammals (MM) and sea turtles (ST) and efforts to avoid their bycatch. The shrimp fishery poses concerns for the conservation of MM/ST due to incidental capture (or bycatch) and reduction of MM/ST bycatch in this trawl fishery are restoration priorities (see PDARP/PEIS-Sections 5.5.10 and 5.5.11; Strategic Framework for MM and ST Restoration Activities). Regulations to limit bycatch in the shrimp fishery have long been in place (e.g. Turtle Excluder Devices or TEDs) and new measures continue to be proposed. However, limited observer coverage of the shrimp fishery (less than 1% of the fishing effort in the Gulf) and gaps in the data on the demographics and health of MM/ST populations (e.g., abundance, bycatch mortality, disease) complicates the evaluation of success of bycatch mitigation measures. These knowledge gaps and deficiencies impede the effective management of bycatch reduction of MM/ST populations in the shrimp fishery compromising the recovery of these protected species and the certification of this fishery as sustainable. This 5-year project proposes a group of activities that address knowledge gaps about the demographics of MMs and the health of STs, improve fishermenâ€™ awareness of the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) regulations pertaining to the shrimp fishery and provide new tools developed with input from stakeholders to evaluate the recovery potential of these populations under specific bycatch reduction scenarios. The use of the Management Strategy Evaluation (MSE) framework, widely used in managing fisheries and marine mammals, allows contrasting the benefits of different levels of survey effort and bycatch reduction measures to meet desired conservation and management objectives. This will be achieved through partnerships with all stakeholders (state & federal resource managers, fishing industry & communities, scientists, NGOs) and an interdisciplinary approach grounded in the principle that fishermen are active participants in the development of the management measures rather than mere â€œsubject-mattersâ€ To leverage effort and costs, this project would be conducted in Mississippi waters, where an ongoing project involving observers on shrimp vessels is underway to estimate MM/ST bycatch rates. However, the same approach would yield similar benefits in any other Gulf state, where the shrimp fishery is an important activity. The primary objectives of this project are:		Yes	Yes	No	No	No	Yes	No		No		$ 16.00	$ -	
	Research and Education	5836	8/13/2018	Industry outreach and education on specially designed TEDs for the Mississippi skimmer trawl fishery	NOAA Project ID# 13911: The aim of this project is to restore sea turtle populations in the Gulf of Mexico, particularly, Kempâ€™s ridleys (Lepidochelys kempii), where small juveniles overlap with the nearshore and inshore shrimp otter and skimmer trawl fisheries in Mississippi. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through enhanced outreach and training in turtle excluder device (TED) technology specifically for the skimmer trawl fishery which will be affected by a TED requirement in 2019. NOAA Fisheries anticipates the implementation of a TED use requirement for the southeast U.S. skimmer trawl fishery in 2019. Industry outreach and education on specially designed TEDs for the skimmer fishery will be crucial to successful implementation and compliance with federal regulations. Improving compliance will reduce potential lethal sea turtle interactions with skimmer trawls in Mississippi coastal waters. Workshops will focus on skimmer trawl TED performance results by TED configuration, installation of pre-constructed TEDs, TED handling techniques, and troubleshooting TED performance problems. Date: Aug 10, 2018	Harrison, Hancock and Jackson Counties	Yes	No	No	No	No	Yes	No		No		$ 50,000.00	$ -	
	Research and Education	5837	8/13/2018	Establishment of a TED outreach and training team for Mississippi	NOAA Project ID# 13910: The aim of this project is to restore sea turtle populations in the Gulf of Mexico through enhancement of their protection in Mississippi coastal waters where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer trawl fishery. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through the establishment of a core TED outreach team to provide enhanced outreach and training in Turtle Excluder Device (TED) technology to Mississippi shrimp fishers, through which TED compliance will be maintained at the highest level possible. A core TED outreach team consisting of a coordinator and a technical expert (TED specialist) will be established for the State of Mississippi. The team will provide outreach and training to Mississippi shrimp fishers on the latest advancements in TED technology and regulatory requirements. The team will work with Mississippi marine enforcement to provide training in the proper methods for inspecting TED compliance and will ensure that TED compliance information is recorded accurately for inclusion in a NOAA TED compliance database. The TED coordinator will receive training from and work closely with the NOAA Fisheries Gear Monitoring Team (GMT) to ensure that the most up to date information is provided to fishers and marine enforcement in Mississippi. Date Aug 10, 2018	Harrison, Hancock and Jackson	Yes	No	No	No	No	Yes	No		No		$ 656,000.00	$ -	
	Research and Education	5847	8/13/2018	Reduction of Marine Mammal Fishery Interactions through Demonstration and Implementation of Better Techniques and Materials for Constructin Trawl Components.	NOAA Project ID# 13899: This project is designed to decrease interactions of marine mammals with commercial shrimp trawling gear. Dolphins are occasionally captured in shrimp trawls or entangled in the lazyline as a result of predation on gilled fish in the trawl, with hundreds of mortalities estimated per year in the Gulf of Mexico shrimp otter trawl fishery. Further, this predation results in extensive trawl damage, creating hours of work to repair the nets and these interactions have resulted in dolphins being injured or killed by fishers out of frustration. The majority of shrimp nets used in the GOM shrimp fishery are made from standard polyethylene webbing. In recent years, material such as Dyneema and Spectra have been introduced into the fishery but have yet to gain widespread use. NOAA Fisheries research suggests that these stronger materials sustain fewer dolphin bite holes compared to polyethylene nets. However, shrimp fishers are unlikely to make the investment to adopt these new net materials unless they know that comparable catch rates can be achieved. This project will compare and quantify target catch rates and dolphin bite damage between polyethylene netting (control) and stronger netting (experimental) aboard commercial trawlers rigged to pull two nets. Testing differing fishing configurations of the net such as comparison of trawl bib adjustments will also be evaluated. Additionally, the project will determine the optimal material and fishing configuration for trawl lazylines to reduce dolphin entanglement. A comparison of different lazyline materials will be conducted to determine if increasing line stiffness will decrease the likelihood of marine mammal entanglement. Drones, optical cameras, and acoustic cameras (DIDSON/ARIS) will be used to observe which materials have fewer dolphin interactions. This project will consist of five different objectives - - Compare the finfish bycatch and shrimp catch rates of Dyneema nets to identical nets made from polyethylene webbing. - Compare the amount of dolphin interactions, by counting number of dolphin bite holes for identical Dyneema and Polyethylene nets. - Compare dolphin interaction rates between lazylines made from differing materials using drones, optical cameras, and acoustic cameras. - Compare dolphin interaction rates between two bib-style trawls with different bib adjustments. - Outreach, distribution, and monetary incentives to fishers to use improved fishing gear. Once gear evaluations are complete the gear that demonstrates the least dolphin interactions will be promoted to the fishery. Improved lazylines or trawls will be given away to a limited number of fishers along with monetary incentives with the requirement of either observer coverage or reporting. Additionally, to ensure fishers are using the gear, NMFS GMT will conduct at sea monitoring of the gear. Once fishers become aware of the benefits of these materials, dolphin/fishermen conflicts should decline resulting in fewer dolphin mortalities in shrimp trawling gear. Additional outreach will conducted at workshops for upcoming TED regulations where these new materials will be promoted. Date Aug 8, 2018	Jackson, Harrison, Hancock	Yes	No	No	No	No	Yes	No		No		$ 800,000.00	$ -	
	Research and Education	5849	8/14/2018	Quantification of nutrient and sediment loads into the Mississippi Sound and Mobile Bay to inform oyster management	NOAA Project ID# 13895: This project will be a comprehensive study of historical and current streamflow, sediment, nutrients, and other pertinent water quality data and corresponding salinity, pathogen, and HAB responses to help inform oyster management in the Mississippi Sound and Mobile Bay. We intend to gather current and historical streamflow and water quality data (circa 1980) to : (1) quantify a surface water budget for freshwater entering these estuaries; (2) estimate trends in sediment and nutrient loads from point and nonpoint sources; (3) gather and analyze historical salinity data compared to historical trends in freshwater streamflow and any other trends related to climate change; and (4) relate trends in nutrient or other pertinent water quality loads to trends in historical pathogen, HAB, and oyster mortality responses. This project will leverage the existing Louisiana, Mississippi, Alabama Coastal Systems (LMACS) effort led by the Mississippi Department of Marine Resources. Date: Aug 7, 2018	Coastal counties in MS and AL	Yes	No	No	No	No	Yes	Yes		No		$ 1,500,000.00	$ -	

	Research and Education	5861	11/14/2018	Biloxi Career and Workforce Training	The Biloxi Career and Workforce Training (BCWT) program evolved from an economic security grant funded by W. K. Kellogg Foundation and awarded through East Biloxi Community Collaborative. We are requesting funding to continue the Biloxi Career and Workforce Training program which will include two sessions, Spring 2019 and Fall 2019 to Biloxi residents ages 18-50. Each participant must complete a Career Readiness course prior to advancing to Electrical and General Construction. The career readiness curriculum includes training specific to financial awareness, basic computer skills, resume writing, interviewing techniques and credit reporting. OMS Knights of Peter Claver, Council 25 provides a weekly electrical class which is held each Thursday for 10 weeks. The goal of the electrical training is to advance participants to Helper/Apprentice level. The electrical curriculum content is presented from NCCER Electrical: Level 1. Curriculum consists of: OSHA safety, construction math, blueprint reading, basic electrical training, wiring, identification of tools and materials, cost and material estimation and in-the-field training experience. Additionally, OMS Knights of Peter Claver, Council 25 provides a weekly general construction class. General construction training class is held each Saturday for 10 weeks. The goal of the general construction training is to advance participants to Helper/Apprentice level. The general construction curriculum content is presented from NCCER Core Curriculum: Introductory Craft Skills. The general construction curriculum consists of: OSHA safety, construction math, blueprint reading, basic construction skills, identification of tools and materials, cost and material estimation and classroom/in-the-field training experiences. Participants conclude the training by visiting worksites to practice job and environmental safety.	Harrison	Yes	No	No	No	Yes	No	No		Yes		$ 30,000.00	########	
	Research and Education	5875	2/22/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune, Mississippi and, 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed (LEED) Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershedâ€™s habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. These indoor exhibits, along with the restored outdoor exhibits and trails of the Crosby Arboretum, will provide for a dynamic and unforgettable visitor experience. Additionally, the Environmental Education Centerâ€™s training classrooms and conference rooms (including distance learning capabilities) will allow for teaching of audiences of all ages and for a greater impact and reach of educational programs and events currently offered at the Crosby Arboretum, which in 2017 included 44 programs and events benefiting 2,828 participants. The potential tourism and educational impact of the Environmental Education Center can leverage on the fact that the Crosby Arboretum is part of Mississippi State University, which provides access to specialized faculty and an abundance of educational resources for educational programming addressing coastal region issues such as environmental resiliency, habitat restoration and conservation, ecotourism and heritage tourism promotion and marketing, to name only a few. These educational events are offered to not only the public but also to K-12 students, garden and naturalist clubs, among others. The Crosby Arboretum is also home to a Mississippi landmark structure, the Pinecote Pavilion, designed by renowned architect E. Fay Jones, a student of Frank Lloyd Wright (Figure 2). This pavilion draws tourists from around the world and will continue to play a key role in the environmental and cultural education/stewardship programs of Crosby Arboretum. The Environmental Education Center will include a gift shop featuring nature-themed items and a Pinecote Art Gallery that will display the work of selected regional	Pearl River	Yes	No	No	Yes	No	No	Yes	100	Yes		$ 9,700,000.00	$ -	
	Research and Education	5875	2/22/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune, Mississippi and, 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed (LEED) Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershed's habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. These indoor exhibits, along with the restored outdoor exhibits and trails of the Crosby Arboretum, will provide for a dynamic and unforgettable visitor experience. Additionally, the Environmental Education Center's training classrooms and conference rooms (including distance learning capabilities) will allow for teaching of audiences of all ages and for a greater impact and reach of educational programs and events currently offered at the Crosby Arboretum, which in 2017 included 44 programs and events benefiting 2,828 participants. The potential tourism and educational impact of the Environmental Education Center can leverage on the fact that the Crosby Arboretum is part of Mississippi State University, which provides access to specialized faculty and an abundance of educational resources for educational programming addressing coastal region issues such as environmental resiliency, habitat restoration and conservation, ecotourism and heritage tourism promotion and marketing, to name only a few. These educational events are offered to not only the public but also to K-12 students, garden and naturalist clubs, among others. The Crosby Arboretum is also home to a Mississippi landmark structure, the Pinecote Pavilion, designed by renowned architect E. Fay Jones, a student of Frank Lloyd Wright (Figure 2). This pavilion draws tourists from around the world and will continue to play a key role in the environmental and cultural education/stewardship programs of Crosby Arboretum. The Environmental Education Center will include a gift shop featuring nature-themed items and a Pinecote Art Gallery that will display the work of selected regional	Pearl River	Yes	No	No	Yes	No	No	Yes	100%	Yes		$ 9,700,000.00	$ -	
	Research and Education	5876	3/4/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: - Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; - On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; - Delivery of medical supplies and support to areas that are inaccessible to first responders; - Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and - Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison,Washington,Orleans,Perry,Forrest,Pearl River,Jackson,St Tammany,Stone,Hancock,Mobile	Yes	Yes	Yes	Yes	Yes	Yes	Yes	72%	Yes		$ 3,250,000.00	$ -	

New	Research and Education	5875	4/8/2019	The Lower Pearl River Watershed Environmental Education and Native Plant Restoration Center at the Crosby Arboretum in Picayune	The Lower Pearl River Watershed Environmental Education Center and Completing the Unbuilt Arboretum Location: Picayune, Mississippi Environmental Education and Tourism: The primary objectives of this project are 1) to construct the Lower Pearl River Watershed Environmental Education Center at the Crosby Arboretum in Picayune, Mississippi following the designs of E. Fay Jones, and 2) to increase tourism and access to the Crosby Arboretum, located adjacent to the I-59 Mississippi Welcome Center. The host site for the proposed Environmental Education Center is the nationally renowned and award winning public garden, the Crosby Arboretum, which is offers a 65 acre native plant conservatory and trail system that highlights sustainable management of habitat types that are key to a healthy Pearl River watershed. The Environmental Education Center will provide a peaceful and educational attraction that will appeal to travelers and locals where they can stop in to explore and learn about the primary native habitats and ecosystems found along the Lower Pearl River Watershed. This new state-of-the-art, sustainably-constructed Environmental Education Center will feature hands-on exhibits that address the main issues impacting the resiliency, stream health, and biodiversity of the Pearl River watershed's habitats. The Center and its exhibits will educate visitors on the benefits of sustainable habitat management and the benefits to a healthy Pearl River watershed and downstream coastal water quality. One of the proposed interior exhibits will be dedicated to interpreting the impact of the 2010 Deepwater Horizon oil spill and its impact to the lower Pearl River. These indoor exhibits, along with the restored outdoor exhibits and trails of the Crosby Arboretum, will provide for a dynamic and unforgettable visitor experience. Additionally, the Environmental Education Center's training classrooms and conference rooms (including distance learning capabilities) will allow for teaching of audiences of all ages and for a greater impact and reach of educational programs and events currently offered at the Crosby Arboretum, which in 2017 included 44 programs and events benefiting 2,828 participants. The potential tourism and educational impact of the Environmental Education Center can leverage on the fact that the Crosby Arboretum is part of Mississippi State University, which provides access to specialized faculty and an abundance of educational resources for educational programming addressing coastal region issues such as environmental resiliency, habitat restoration and conservation, ecotourism and heritage tourism promotion and marketing, to name only a few. These educational events are offered to not only the public but also to K-12 students, garden and naturalist clubs, among others. The Crosby Arboretum is also home to a Mississippi landmark structure, the Pinecote Pavilion, designed by renowned architect E. Fay Jones, a student of Frank Lloyd Wright (Figure 2). This pavilion draws tourists from around the world and will continue to play a key role in the	Pearl River	Yes	No	No	Yes	No	No	Yes	100	Yes		$ 9,700,000.00	$ -	
New	Research and Education	5876	4/16/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: • Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; • On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; • Delivery of medical supplies and support to areas that are inaccessible to first responders; • Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and • Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison,Washington,Orleans,Perry,Forrest,Pearl River,Jackson,St Tammany,Stone,Hancock,Mobile	Yes	Yes	Yes	Yes	Yes	No	Yes	72	Yes		$ 3,250,000.00	$ -	
New	Research and Education	5882	4/17/2019	On-Site Animal Holding and Facility Operations Building	Development of on-site facilities at Mississippi Aquarium to house ambassador animal collection that the aquarium uses for educational outreach both at the aquarium and at schools throughout the state. The facility will also enlarge our on-site animal holding and treatment capacity to care for more animals on site and provide space for maintenance shops to handle rebuilding of pumps and equipment to increase life expectancy. Small office space for the maintenance team and aquatic team will also be included. This space will provide opportunities to partner with Mississippi higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level. This building would go on the footprint of the Masonic Lodge Building.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 1,750,000.00	$ -	
New	Research and Education	5883	4/17/2019	Conservation Awareness Campaign (through interpretive signage and exhibits)	Development and installation of dynamic graphics throughout Mississippi Aquarium's campus that will highlight critical content that supports the conservation of Mississippi's most precious water systems. Utilizing a variety of media including digital monitors, informational signage, interactive displays, and live interpreters, the aquarium will provide these world-class visuals to teach guests about a variety of species in our waterways, bayous, and the Gulf to better understand why the knowledge they are gaining is so important.	Harrison	Yes	No	No	No	No	No	Yes		Yes		$ 1,000,000.00	$ -	
New	Research and Education	5884	4/17/2019	Marine Science Digital Command Center	Construct an exhibit linking the USM Gulf Coast Research Laboratory and its fleet of vessels with visitors to the Aquarium through live and pre-produced video and interactivity by highlighting USM's research projects and scientists. Pre-produced programming would run on the screens at the Mississippi Aquarium on a regular basis including (1) Stories about scientists and how they became engaged in studying the Gulf; (2) featured research on aquaculture, marine ecology and oceanography; (3) highlights of the USM Gulf Coast Research Laboratory and related marine conservation and research resources in the region. Interpretive graphics, and large screen data sets and maps would provide context for understanding the role of specific research projects and needs in relation to challenges and opportunities in the Gulf of Mexico.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 150,000.00	$ -	
New	Research and Education	5886	5/14/2019	Mississippi Aquarium Mobile Marine Unit (MMU)	The MMU will provide a hands-on education for both children and families alike throughout the State. Teachers and educators from grades K to 12 will have the ability to use the MMU at their schools and present a variety of lessons. These lessons can range from basic biology and anatomy, to animal care and building aquatic system all while threading in a message of costal conservation and preservation. As the MMU moves throughout the community, new relationships will be made in supporting the aquariums coastal conservation messaging to promote the health and well being of the community. The MMU enhances an important conversation about aquatic life, animal conservation, and sustainable lifestyles everywhere it rolls. The MMU will connect educators through association with the aquarium and will create a network of people passionate about the conservation and sustainability in the State of Mississippi. This request entails the build out of the MMU (a 31 ft Airstream Trailer that will be modified to look like a submarine), the vehicle to pull the MMU, and staffing of the MMU for the 4 years of operation. surrounding regions.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 450,000.00	$ -	
New	Research and Education	5887	5/20/2019	Inside Explorer Technological Programs	The Inside Explorer software utilized in educational programs will generate public awareness about the internal systems of native animals. Teaching our community about the different functions of living things gives the community a unique perspective on what they need to survive. Just like humans, living things have internal systems such as skeletal, muscular, circulatory and more. Knowing these intimate details provides a better understanding on what we can and should do to support a healthy environment and a sustainable Gulf.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 270,000.00	$ -	

New	Research and Education	5898	3/3/2020	Improvement of Rehabilitation Facilities for Sea Turtles and Marine Mammal sin Mississippi to Service to north central Gulf of Mexico Region (MS, AL, LA)	The north central Gulf of Mexico is home to endangered and protected species such as bottlenose dolphins (Tursiops truncatus), West Indian manatees (Trichechus manatus), as well as loggerhead (Caretta caretta), green (Chelonia mydas) and Kemp's ridley (Lepidochelys kempii) sea turtles. These species are all at risk to both anthropogenic and natural threats such as pollution, boat strikes, infectious diseases, fisheries interactions, and natural disasters â€" making necessary the creation of rehabilitation centers to rescue and treat sick and injured marine mammals and sea turtles. The Institute for Marine Mammal Studies (IMMS) is a marine mammal and sea turtle rehabilitation facility, strategically located on the Mississippi gulf coast. IMMS has been involved in the rescue, rehabilitation, and release of marine mammals and sea turtles since 1984, and IMMS' staff along with veterinarians from MSU's College of Veterinary Medicine have the necessary experience, facilities, and capabilities to conduct rescues and rehabilitation activities within this region as well as coordinating with both State and Federal agencies. Following the Deepwater Horizon (DWH) Oil Spill in 2010, IMMS built a turtle rehabilitation center to house sick and injured sea turtles and marine mammals. This structure was originally intended to be temporary and allow IMMS to respond to the spill alone. Since 2010, IMMS has responded to over 1,000 live sea turtle strandings, and has assisted in the rehabilitation of a large number of cold-stunned sea turtles which were flown to Gulfport from the New England Aquarium. Many of the turtles admitted to the facility do not fully recover during the warm summer months, resulting in the use of the rehabilitation facilities on a year-round basis. IMMS is in need of a permanent rehabilitation facility to provide better conditions for turtles that over-winter. An increased number of tanks, as well as larger tanks, and an improved drainage system will also allow IMMS and MSU to provide care for large sub adult and adult sea turtles that require a long-term rehabilitation plan. Moreover, with an enhanced rehabilitation center, IMMS will be able to facilitate sea turtle conservation on a national and regional level by being able to offer support to other stranding facilities and provide optimal high level rehabilitative care for a large number of turtles during environmental disasters (e.g., oil spills, blue-green algal blooms, and red tide). Currently, the IMMS stranding team responds to live turtles in Alabama and Mississippi, and has historically responded to marine mammal and sea turtle strandings in eastern Louisiana. The work of the IMMS stranding team can be greatly enhanced by the establishment of two satellite facilities, created for the purpose of triaging sick and injured sea turtles prior to transport back to the main campus in Gulfport, MS. This would enable IMMS to better respond to sea turtle strandings in eastern Louisiana and Alabama. The first of these satellite facilities would be established in/or around Slidell, Louisiana, enabling IMMS to respond to incidentally captured sea turtles in eastern Louisiana. The second satellite facility would be established near	Harrison	Yes	No	No	No	No	No	Yes	75	Yes		$ 4,950,000.00	$ -		
New	Research and Education	5903	4/30/2020	ISC Sustainability and Restoration Initiative	The project will expand upon projects from 2015 NRDA funding received by INFINITY Science Center that would introduce the importance of sustainability and renewable energy as valuable aspects of restoration and future protection of wetland ecosystems. Electricity that is non-solar requires the use of fossil fuels and the expansive use of fossil fuels created the demand that led to the BP disaster. Reducing the use of fossil fuels for electricity decreases the demand for fossil-fueled sources of electricity thereby reducing the overall risk of further disasters. This project includes the addition of solar panels with battery backup for INFINITY Science Center with an educational component inside the building to increase public learning and awareness about the importance of sustainability and renewable energy in ongoing wetland protection. The project will also ensure that our electric trams, purchased through INFINITY's initial NRDA award, are solar powered rather than powered by electricity that is from non-renewable fossil fuel sources. The project aligns with NRDA and Restore Funding purpose and guidelines. INFINITY plans to lead by example along the Gulf Coast of Mississippi through the implementation of non-fossil fueled solar energy use thereby encouraging others along the coast to adopt renewable energy practices and sources. INFINITY is highly visible along eastbound I-10. Passing travelers will see the solar panels and our sign will encourage these travelers to go to our website to learn more about renewable energy and why INFINITY chose to lead along the coast with solar renewable energy. The program aligns with the main strategic goals of INFINITY Science Center for financial sustainability to ensure continued programming and to lead in environmental education and stewardship of our wetlands.	Hancock	Yes	No	No	Yes	No	No	Yes	50	Yes		$ 2,000,000.00	$ -		
New	Research and Education	5904	4/30/2020	A comprehensive marine debris intervention strategy to help restore sea turtles in the Gulf of Mexico	NOAA Project ID#14251: Overarching Goals Related to Nexus to Injury Contribute to the recovery of sea turtle populations injured by the BP oil disaster by addressing the anthropogenic threat of marine debris and derelict fishing gear. This threat would be ameliorated through the removal, reduction and prevention of marine debris and ghost fishing gear, effectively decreasing barriers to nesting sites, enhancing sea turtle nesting opportunity and productivity and lowering the risk of hatchling, sub-adult and adult entrapment or entanglement in derelict fishing gear. Additional goals are: 1) to build capacity and understanding within the recreational and commercial fishing sectors across the Gulf of Mexico to reduce loss of, and minimize risks and biological impacts resulting from ghost fishing gear; and 2) to engage and educate members of the consumer packaging and product industry to support and advance upstream, private sector intervention strategies or policies to reduce macroplastic inputs to the Gulf of Mexico. The project would be developed and implemented to maximize benefits for injured avifauna and marine mammal populations affected by marine debris and ghost fishing gear. Project Overview In collaboration with local conservation organizations, scientists and fishing communities throughout the Gulf of Mexico, Ocean Conservancy proposes a comprehensive marine debris intervention strategy to help restore sea turtles in ocean waters impacted by the Deepwater Horizon (DWH) oil disaster. This work is centered on four specific objectives, each advanced by a suite of integrated activities. This work leverages our institutional expertise through the International Coastal Cleanup and Global Ghost Gear Initiative, new scientific research and our successful effort to secure a framework and funding for Gulf restoration following the BP event to advance measurable conservation outcomes and management decisions. Ocean Conservancy's decentralized volunteer infrastructure will allow local orga nizations to plan and conduct cleanups more strategically and effectively, and allocate effort where conservation impact is likely to have the greatest benefit. This body of work builds on key relationships in Gulf Coast states that Ocean Conservancy has developed over the last two decades, including with the fishing community and numerous ICC partners. The work is informed by new research findings from Ocean Conservancy's extensive marine debris database to identify marine debris hotspots both in the United States and internationally (e.g., Mexico and Caribbean). Objective 1: Identify geospatial marine debris hotspots, estimate vulnerability and identify intervention opportunities Objective 2: Reduce impact on marine wildlife by removing macroplastic marine debris and derelict fishing gear at strategic times and locations on beaches, at piers and in offshore habitats Objective 3: Inform the recreational and commercial fishing communities on how to best reduce lost/derelict fishing gear to better protect marine wildlife Objective 4: Build political and private sector understanding and support from the largest contributing sources/cities/businesses for upstream intervention strategies NOTE: Detailed information on project background, activities for each objective listed above, potential contractors		Yes	No	No	No	No	No	No		No		$ 5,500,000.00	$ -		
New	Research and Education	5907	5/2/2020	Reduce Harmful and Lethal Impacts to Dolphins from Illegal Feeding Activities	NOAA Project ID# 14285: It has been well documented for more than 20 years that illegally feeding wild dolphins can lead to a variety of high risk situations that place both dolphins and people in danger (Cunningham-Smith et al., 2006; NMFS 1994; Orams et al., 2002; Samuels & Bejder, 2004). When dolphins learn to associate people with food, unnatural behaviors such as begging for handouts disrupt their natural foraging patterns and become an abnormal and risky feeding strategy (NMFS 1994; Powell & Wells, 2011). Fed dolphins approach boats more readily looking for handouts, thus increasing the animals' risk for boat strike or gear entanglement (Bechdel et al., 2009; Powell & Wells, 2011; Samuels & Bejder, 2004; Wells & Scott, 1997). Fed dolphins can also become targets for human acts of retaliation, including fishers who become frustrated by dolphins begging, removing bait or catch from their lines, or scavenging on undersized throw-backs. Begging behaviors can be passed through a dolphin population via social learning, thus perpetuating and increasing the prevalence of the problem over time (Donoghue et al., 2002; Wells, 2003; Whitehead et al., 2004). Calves of provisioned mothers are at increased risk for compromised developmental and social learning skills, predation, and insufficient hunting experience due to neglect while mothers are seeking handouts from humans (Foroughirad & Mann, 2013; Mann & Barnett, 1999; Mann & Kemps, 2003). Illegal feeding of wild dolphins has been documented or reported in every Gulf state, with several areas being considered hot-spots, and by various water users (i.e. tourism vessels, commercial and recreational fishermen etc) . Therefore, the goal of this project is to reduce lethal impacts to dolphins from illegal feeding activities known to occur in Gulf state waters by effectively changing human behaviors through a targeted outreach and education strategy in a phased approach: (1) Review outcomes from social science studies previously conducted for d olphin-human interactions (e.g., Duda et al. 2013; Responsive Management, 2011 and 2013), evaluate additional needs, and conduct additional social science studies (e.g., focus groups, surveys) to fully characterize the nature and extent of illegal feeding by user group, their motivations/perceptions/attitudes, and receptiveness to different messages and tools; (2) based on the social science studies, develop a comprehensive and targeted outreach plan to effectively educate and inform target audiences about the harm of feeding wild dolphins and how to help promote dolphin conservation; (3) partner with states and local stakeholders to widely distribute and communicate educational tools and messages to reach targeted user groups; (4) Repeat the social science studies to evaluate the use of informed and targeted outreach/education to effectively change human behaviors. Date Entered: Oct 25, 2019 Edited: oct 28, 2019		Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -		

New	Research and Education	5911	5/2/2020	Micro-refugia for shorebirds and seabirds - An incentive based project	NOAA Project ID#14311 The Gulf Coast has clearly been identified as incredibly important for shorebirds and seabirds with threats of habitat destruction from coastal storms, sea level rise, and human factors continuing to impact their populations. Human populations and tourism activities continue to grow along the Gulf Coast limiting habitat availability for shorebirds and waterbirds. Much attention has been placed on increasing nesting opportunities for many species breeding species through habitat restoration and stewardship initiatives. However, less emphasis has been placed on the wintering and migratory periods when there is an influx of tourists to the Gulf region. This has greatly impacted where birds can feed and roost to maintain their condition and prepare them for migration. Carry-over effects that sub-optimal habitat in wintering areas and migration stopovers can be substantial to populations particularly those already suppressed or when northern sites are also diminished (e.g. Delaware Bay). This project aims to increase the number of year-round refugia (protected areas) in the Gulf Coast region with incentive-based conservation. Public and private shorelines are major destinations for recreational use and the closure of those areas comes at some cost to the landowners. Funding is needed to incentivize the closure of small portions of beach to offset the cost of the closure. The small areas to be identified are modeled after Fort De Soto County Park, Pinellas County, FL where the park has set aside a â€œShorebird Habitat Areaâ€ where there is no entry. With a mere 300 meters of beach closed, this area has become a destination for large flocks of shorebirds and seabirds to rest and feed when sub-tidal sand flats and spits are covered during high tides. This is one of the only places in the immediate region that red knot flocks have been consistently recorded for nearly 12 months out of the year as one example of the success of this strategy. This â€œmicro-refugiaâ€ could be a low- cost/high-reward strategy if employed judiciously throughout the Gulf. There are key characteristics that make this a potentially powerful strategy if replicated gulf-wide. This include: • Public and private shorelines that that have high human use • Is or is in close proximity to existing resources foraging areas such that it provides feeding and/or roosting opportunity • Ease of enforcement The first phase of this project would be to work with partners to identify sites that would be targeted for incentive-based refugia. The second phase would be to determine the annual cost that is necessary and reasonable to offset public use of beaches on public and/or private lands. Finally, implementation would be to establish 2-3 year agreements with agencies and private landowners to evaluate the bird response and measure success of the program for future funding.		Yes	No	No	No	No	No	No		No		$ 500,000.00	$ -	
New	Research and Education	5913	5/2/2020	Experimental Oyster Leases as a Platform for Demonstrating Effective Restoration Practices	NOAA Project ID#14308 The continued lack of productivity from oyster reefs in the northern Gulf of Mexico remains a critical ecological and economic issue for the region. Geographic proximity and inter-connectivity of the Mississippi, Louisiana and Alabama coastal systems â€“ in addition to the commonality of issues with oyster populations those areas â€“ support the concept of a multi-state collaboration on this innovative regional project. We propose the establishment of leases in Mississippi, Louisiana and Alabama coastal waters for the creation of reefs to provide science-based guidance for successful restoration programs. The creation of reefs on water bottoms leased to states and/or research universities will provide numerous advantages unattainable by other means, including: (a) controlled/restricted access to reefs to facilitate long-term assessment, (b) implementation of a sound experimental design for rigorous statistical comparisons, (c) siting of leases along a gradient of varying hydrological conditions to assess regional scale functionality, (d) integration of cost-benefit analyses to assess and maximize ROI for reef productivity, and (e) establishment of appropriately scaled structures to demonstrate effective coastal restoration practices across a broad spatial extent. Twelve leases of 75-acre coverage each are proposed in Mississippi, Louisiana and Alabama coastal waters. Reefs must be large enough to be representative of naturally-occurring reefs but not so large as to be prohibitive from a cost or maintenance perspective. Multiple reefs are also required to serve as replicates for assessing within-site variability of factors of interest. In consideration of those factors, reef plots of one acre in areal coverage are proposed. Each lease will be divided into two sections, one of which will encompass 50 acres and contain nine 1-acre reef plots therein. The inclusion of nine reef plots within each lease would allow for a minimum of three replicates for a maximum of three t reatment levels within each lease. The second section will encompass 25 acres to allow for the inclusion of larger reef plots for supplemental research purposes. Specific experimental treatments and their step-wise implementation over time may include cultch type/size, planting density, relief/height, and application of hatchery-reared oysters. Of critical importance to project success is development of a strategy which allows for incrementally addressing key research questions from construction through long-term establishment, and a tiered assessment approach, inclusive of construction monitoring, performance monitoring and monitoring for adaptive management, for each successive investigatory action is proposed. This design will provide the foundation for a collective of long-term reference sites for which restoration strategies can be assessed with clearly-defined goals based on quantifiable metrics. The project will require a staged implementation process, to include (1) site selection, permit acquisition and lease delineation, (2) reef construction and (3) long-term monitoring. Site selection will be based primarily on assessments of hydrological conditions and benthic suitability, and federal and/or state permits may be required for leasing of water bottoms, cultural resources and/or protected species. Reef construction will include acquisition of	Harrison	Yes	No	No	No	No	No	No		No		$ 23,825,000.00	$ -	
New	Research and Education	5918	5/2/2020	Reducing sea turtle bycatch at shore-based recreational fishing sites	NOAA Project ID#13584: This project idea focuses on addressing bycatch of sea turtles at shore-based locations that concentrate recreational fishing (fishing sites), such as fishing piers, bridges, and other shoreline structures, and would restore for injured sea turtles by reducing this bycatch. The goal of the project would be to identify factors (e.g., bait type, hook type, discarded bait in the area, pier lighting, depth of pier, fishing time, etc.) contributing to the incidental capture of sea turtles at fishing sites and to then implement voluntary programs to reduce captures from occurring. This could be accomplished through the following: 1) Create an inventory of fishing sites in the GOM and characterize the sites relative to variables that may influence bycatch of sea turtles (e.g., night fishing, fish cleaning stations, bait types, hook types, etc.). 2) Characterize bycatch of sea turtles at fishing sites through angler surveys, the collection of standardized information from incidentally captured turtles reported to the STSSN, and assessment of gear recovered, to better understand co-factors influencing sea turtle bycatch, 3) Develop and implement a comprehensive educational effort to the recreational fishing community to promote reporting of incidental captures to trained responders to reduce injury to bycaught sea turtles, and 4) Develop, test, and implement a pilot program to reduce sea turtle bycatch at fishing sites through implementation of voluntary fishing practices; this could involve voluntary measures such as bait type, hook type, or other identified co-factors. The project is envisioned as a 5-year project, but it could be scaled up or down based on funds available. It is envisioned to be implemented in each of the 5 gulf states, with potential variations to implementation based on an individual state's needs. Some of this work has been initiated by NOAA and/or by the STSSN already, and the project would be designed to build on existing knowledge and efforts. NOAA and the Gulf states could jointly implement this project. Project Entered: May 22,2017 Edited Oct 25, 2019		Yes	No	No	No	No	No	No		No		$ 1,000,000.00	$ -	
New	Research and Education	5923	5/2/2020	Identifying sea turtle interaction hotspots in the Gulf of Mexico shrimp fishery using passive acoustics	NOAA Project ID#14283 In the southeastern U.S. shrimp fishery, Turtle Excluder Devices (TEDs) have been shown to be 97% effective at excluding turtles. However, the effectiveness of TEDs largely dependent on fisher compliance with proper installation and operational maintenance of the devices. To ensure proper TED compliance, NOAA) developed a Gear Monitoring Team (GMT) program, which operates in the Gulf States out of the NMFS Pascagoula Lab. The GMT works with the fishing industry to improve their knowledge and understanding of how to effectively build, use, and maintain TEDs. This is achieved through fisher workshops and courtesy dock-side and at-sea TED inspections. The GMT also works closely with the Observer Program to identify specific areas of bycatch concern within the Gulf. However, turtles interactions with shrimp trawls are seldom detected by onboard observers because most are expelled from the mouth of the trawl or slide out of the TED escape opening (alive or dead) during haul-back. Therefore, the GMT is often times forced to be reactive and focus outreach efforts to areas where stranding events have occurred. Sea turtle restoration efforts in the shrimp fishery could greatly benefit from a better understanding of the spatial and temporal distribution of sea turtle interactions. This would allow the GMT to be proactive and strategically target outreach efforts in â€œhotspotsâ€ areas where and when high frequencies of sea turtle interactions are likely to occur. Hotspot identification could also be used to inform the STSSN and predict areas of increased likelihood of vessel strikes. NOAA researchers based in Pascagoula Mississippi, have discovered that sea turtles, due to their hard shells, make a distinctive sound when they come into contact with the aluminum bars of the TED, as compared to other marine organisms. We propose to place autonomous passive acoustic recorders (Ocean Instruments Sound Trap) on TEDs during commercial trawling operations in conjunction with the man datory observer program and enhance analytical capacity within the program. The acoustic recordings will be used along with electronic logbooks to calculate the time and positions where interactions occur. This methodology will provide a cost effective way to identify spatial and temporal sea turtle hotspots to inform GMT outreach efforts and TED inspections, management, and future restoration projects. Date Entered: Oct 25, 2019		Yes	No	No	No	No	No	No		No		$ 3,200,000.00	$ -	

New	Research and Education	5927	5/2/2020	Modeling bird populations across the Gulf of Mexico to inform restoration planning	NOAA Project ID#14265 Robust assessments of bird population trends and their drivers are essential to inform selection of priority species and habitats for conservation and restoration. Resource managers need to know which species are declining as well as which habitats and regions are resilient to future change in order to make informed decisions that protect birds, their habitats, and their communities. Furthermore, this information must be shared with resource managers in an accessible format that enables them to make efficient and timely management and conservation decisions. Therefore, we propose to model and project the effects of climate and land cover change on the sustainability and resiliency of bird communities across the Gulf of Mexico. Traditional analytical methods utilize data from single surveys, none of which have sufficient spatial and temporal coverage for robust modeling. We will resolve this issue and provide the accurate, high-resolution models needed to inform Gulf conservation by implementing a recently-developed integrated modeling technique. To maximize inference from across a wide range of research and monitoring projects, we will develop Bayesian integrated hierarchical models that can effectively combine data across multiple structured and semi-structured protocols. We will use these methods to produce robust estimates of population trends and distributions for multiple landbird, shorebird, and marsh bird species, while accounting for uncertainty. By incorporating powerful forecasting of land cover change across the Gulf we will be capable of describing how current bird distributions and trends will change in the future. Species-specific maps of current and future distributions will be created from this effort and provided to resource managers. These distribution/abundance models will incorporate a suite of remotely-sensed land cover and climate predictors variables used in recent Gulf-wide habitat modeling efforts (Lankford et al. 2018) to model environm ental relationships. These may include proportional cover of estuarine and palustrine wetland, shoreline, agriculture, grassland, shrubland, and developed habitats; landscape metrics such as patch size or connectivity of land cover types; length of sandy beach; annual spatially-interpolated climate variables; elevation; and distance to coast or other important habitats or features. The precise suite of environmental predictors will be selected on a species-specific basis based on ecology and life-history characteristics to ensure biologically-relevant predictors are included and increase model performance. The projected distribution maps will be produced at a high spatial resolution for multiple time periods spanning the 1960s through the 2050s. These projected distribution maps should be particularly useful to resource managers, including for identifying: 1) future priority areas to conserve or restore, 2) areas that can serve as corridors connecting current and future bird habitat, 3) areas where management efforts can be conducted that will help transition the land cover from its current form (e.g., agricultural field) to a habitat type that will support birds in the future (e.g., a wetland), and 4) strongholds that are important today and will continue to be important in the future, and conserving or restoring those areas as needed. Our primary		Yes	No	No	No	No	No	No		No		$ 1,500,000.00	$ -		
New	Research and Education	5928	5/2/2020	Developing a Gulf-wide bird population database to inform restoration planning	NOAA Project ID# 14264 Across the Gulf of Mexico, bird communities and the habitats that support them are threatened by many concurrent and synergistic threats including human development, disturbances such as oil spills, and climate change. A central challenge to developing the understanding of bird status and distributions needed to inform effective restoration planning has been the lack of a central database to house and share regionwide survey data. Extensive bird occurrence and abundance data have been collected across the Gulf of Mexico prior to and following the Deepwater Horizon oil spill. These data include observations from multi-decadal monitoring programs that provide a historical context for current bird distribution and abundance. Yet currently data are scattered across many proprietary databases, if they exist in a database at all, stored in a multitude of data structures and formats. This prevents the integration, or even awareness, of data needed to achieve restoration planning goals. Therefore, we will compile available avian count and occurrence datasets in a central relational data warehouse to facilitate subsequent analyses and make these data available to land managers and restoration planners. Extensive semi-structured community science data (i.e., data collected by volunteers) are available for Gulf of Mexico bird species through monitoring programs and databases including eBird, National Audubon Society's Christmas Bird Count, U.S. Geological Survey's Breeding Bird Survey, and state-level colonial waterbird surveys. By comparison, structured data rely on more intensive sampling and standardized protocols that provide the additional information necessary to account for imperfect detection and produce accurate abundance estimates. Multiple structured datasets also exist for suites of birds across the Gulf of Mexico, including the Gulf of Mexico Marsh Bird Atlas and Audubon Coastal Bird Survey. Moreover, many other individuals and entities possess Gulf of Mexico bir d occurrence and abundance data, including Natural Resource Damage Assessment oiled bird surveys; targeted surveys that focus on a single species, guild, or site such as National Audubon Society Least Tern and Piping Plover monitoring; and academic research. Audubon has already begun compiling structured and semi-structured data for species included in this proposal. We will expand this collection by working with resource managers and the Gulf of Mexico Avian Monitoring Network (GoMAMN) to coordinate discovery and access of additional public and private datasets. To transfer project findings to resource managers, compiled data will be migrated to a central warehouse and integrated with tools that give conservation and resource managers easy access to a wide variety of data updated regularly. We propose to leverage and expand the work of the Avian Knowledge Network to build the technical infrastructure to easily and rapidly describe datasets, integrate the bird data into a data catalog using newly developed ingestion and translation tools, and develop new data exploration tools. The proposed data management developments will house counts as well as associated sampling details and metadata (e.g., date, time of day, and weather). A publicly accessible interface will enable users to create customizable queries,		Yes	No	No	No	No	No	No		No		$ 1,200,000.00	$ -		
New	Research and Education	5930	5/2/2020	Coordinated Monitoring of Birds for Restoration and Conservation across the Northern Gulf of Mexico	NOAA Project ID# 14256 Birds are a conspicuous and remarkable natural resource of the Gulf of Mexico with hundreds of species and billions of individuals supported at some point during their annual lifecycle by barrier islands, beaches, marshes, and coastal forests across the Gulf ecosystem. While birds are an indicator of ecosystem health and natural resources on which humans rely across the region, the Deepwater Horizon (DWH) oil spill affected 93 species and potentially over 100,000 individuals through oil exposure to individuals and their habitats. Impacts on global populations are likely greatest on the 45 injured species, which make up many lost individuals that breed within habitats located in the five Gulf States. Reduced breeding members or limited nesting habitat can substantially limit recruitment, thereby undermining state and federal recovery efforts. Understanding bird-habitat associations and responses to management efforts can drastically improve and inform restoration planning. The ability to monitor injured species across the Gulf states would be instrumental in assessing past restoration efforts (i.e., birds recovered per project investment), which is crucial to implementing successful future restoration projects. The lack of adequate pre-DWH spill data to inform decision-makers and provide a robust assessment of realized damages and planned restoration efforts for birds highlighted the need for region-wide monitoring. Our primary objective is to collect information that will establish a baseline of the status and trends of avian populations in a changing coastal landscape, as well as provide a better assessment of damages to avian resources after a future natural or anthropogenic disaster. Data collection will be used to answer pressing questions related to how populations respond to management actions, such as restoration, vegetation plantings, prescribed fire, and ecological processes, such as hurricanes, habitat succession, predation, that have been identified as h igh priorities (i.e., high uncertainty and high impact on populations) through a structured decision-making process. To provide crucial data on injured bird species along the northern Gulf Coast, we plan to implement our monitoring strategy over three distinct phases. Phase 1 would involve: (1) coordinating with state, federal, and NGO partners around the northern Gulf coast to leverage existing avian and abiotic datasets (e.g., NOAA Sentinel Site Program, USFWS Inventory & Monitoring program), (2) collating the available disparate datasets and determining common links that can be used to reduce uncertainty related to avian populations, (3) linking existing datasets to query the data needed to address uncertainty, (4) assessing potential sites and logistics for on-the-ground monitoring in each state. Phase 2 would be an on-the-ground effort to asses the status and trends of injured avian resources and habitats during the breeding season in each Gulf state. This would use a network of a minimum of 5 nodes to achieve spatially uniform regionwide coverage, where we will monitor the species-specific number of individuals in each area and, when possible, breeding parameters. Each sampling node will consist of an 80 km radius around one of the NOAA Next Generation Radar stations, which leverages the spatially largest and		Yes	No	No	No	No	No	No		No		$ 18,700,000.00	$ -		
New	Research and Education	5936	5/3/2020	Kemp's ridley Stock Assessment	NOAA Project ID# 14185 On October 17, 2018 the Gulf States Marine Fisheries Commission (GSMFC) hosted a special session on the Kemp's ridley sea turtle during their Annual Meeting, held at South Padre Island, Texas. The aim of this session was to update the GSMFC on the present state of knowledge on the ecology and population status of the Kemp's ridley sea turtle. From the presentations by 7 experts on Gulf of Mexico sea turtles and recently published syntheses on trends in reproductive output (e.g., Gallaway et al. 2016a,b; Caillouet et al. 2016, 2018) it was clear that the present state of knowledge was insufficient to draw firm conclusions on the status of the Kemp's ridley population. Annual nest counts, the only index of the Kemp's ridley population, were steadily climbing prior to 2010 but continued recovery of the population has not been indicated. In fact, in the past two years large declines in nesting have been seen. Preliminary indications are that more than two times as many nests would be needed to reach the 25,000 nest benchmark that was set for downlisting. Whether this represents mortality in nesting females or reduced body condition so that fewer nests are laid is not known. Regardless, it means that reproductive output of Kemp's ridley has dropped. What will this mean for Kemp's ridley in the future? What are the implications for fishermen? Waiting to see what happens next year is not the answer. With the large drop in nesting over the past two years, even if nesting increased each of the next four years it would be nearly impossible to gauge whether this represented resumed population growth. The lack of continued growth is a concern and determining the causes should be prioritized. Despite the present uncertainty, it is also apparent that developing a mechanistic understanding of spatiotemporal variation in Kemp's ridley abundance and its role in population dynamics is within reach. We propose conducting a Kemp's ridley stock assessment to identify the principle anthropogenic and environmental drivers of Kemp's ridley population dynamics and generate mechanistic predictions of future variability and trends. Without a rigorous quantitative assessment, understanding the efficacy of recovery efforts for Kemp's ridley will be impossible. Date Entered: Sept 25, 2019		Yes	No	No	No	No	No	No		No		$ 250,000.00	$ -		

New	Research and Education	5946	11/25/2020	Gulf Coast CSET Tech Fusion - Advanced Technology Training for the 21st Century	In the new Millenia, the evolution of digital technologies has radically changed the way we live and work. This revolution has also changed the demands that citizens, businesses, and other organizations have placed on the digital society. However, the Mississippi Gulf Coast faces a severe lack of well-trained IT workers. Gulf Coast Tech Fusion will focus on developing an IT workforce for economic expansion, innovation, and societal growth. Tech Fusion will bring together a dual focus within the CSET building: (1) provide IT training and (2) provide flexible facilities to develop IT solutions for the development and implementation of regional business technology solutions. and industry. Gulf Coast Tech Fusion will provide to students requisite training in emerging technologies (e.g., Cybersecurity, Coding, Artificial Intelligence (AI), Virtual Reality (VR)/Augemented Reality (AR), and Simulation/Game Design) that could make the Gulf Coast region an international leader in the high-tech sector. This program would provide momentum to accelerate a trained IT workforce and opportunities for business and industry to upskill incumbent workers. For example, MGCCC is partnering with EON Reality to create a center of excellence for extended realities (XR); XR is an umbrella term for all immersive technologies, such as AR, VR, mixed reality (MR), and those that are still to be created. This program would help to develop the next generation of talent to develop these technologies, and it would provide support to companies to explore and develop training via XR. As for future-proofing, a push to identify a center of excellence to create AR and VR training is now critical. This would allow training to continue in spite of any external factors that may come requiring remote worker and/or social distancing. Gulf Coast Tech Fusion will be housed in the Center for Security and Emerging Technology (CSET) â€" further leveraging a BP Restore project (i.e., CSET). The CSET building received partial funding in an earlier round of BP Restore projects, so this proposal includes the request to fund the remainder of the CSET building. Operating Tech Fusion in CSET will provide Mississippi Gulf Coast Community College (MGCCC) with a platform to conduct cutting-edge IT training and develop solutions for local businesses and industry. The region must invest in equipment and infrastructure to facilitate this training, future-proof the Mississippi Gulf Coast, and better mitigate unexpected disasters in the future. Specific spaces within CSET will be used for corporate training and development, while other areas of CSET will focus on credit instruction in IT. In some areas, the training needed above may require that equipment be purchased to facilitate the training. MGCCC will create technology enhanced (aka, HyFlex) classrooms that allow for seamless synchronous communication with students/incumbent workers remotely. That is, the HyFlex classrooms will allow students and incumbent workers to remotely engage in the class and/or training.	Harrison	Yes	No	Yes	No	Yes	No	No		Yes		$ 7,000,000.00	########	
New	Research and Education	5949	11/30/2020	Impacts of changes in freshwater flow and salinity on sea turtle distribution and ecology in Mississippi Sound	The aim of this project is to restore sea turtle populations in the Gulf of Mexico through satellite tracking of sea turtles to inform habitat use changes as it relates to changes in salinity of Mississippi Sound. Loggerhead, Kemp's ridley and green sea turtles are known to occur in Mississippi Sound and changes to freshwater flow will be likely to affect the extent and composition of habitat, either by changing salinity or nutrient conditions. Such changes are likely to affect the sea turtles that forage in these habitats. It is critical to document sea turtle distribution and use of Mississippi Sound in relation to salinity, and relate this to potential ecosystem changes as a result of freshwater releases and restoration efforts.	Jackson,Hancock	Yes	No	No	No	No	No	No		No		$ 1,271,000.00	$ -	
New	Research and Education	5971	12/8/2020	Mississippi West Indian Manatee Health Assessments and Research	NOAA Project ID# 14538: Objectives: This project is a solution based program developed to answer critical questions and provide informed data about the population, health and future of manatees in Mississippi. Work in close collaboration with Dauphin Island Sea Lab to increase Manatee research in MS using standardized methodologies. This will assist with knowledge of movement and occupancy patterns including identification of individuals, origins, seasonal dispersal and site fidelity, and functional movement modes of those individuals during a tracking period. Conduct MS annual health assessments with satellite telemetry to understand health, spatial distribution and movement. Activities to be completed: Assist the Manatee Sighting Network based at DISL in AL with MS based manatee reporting, respond to manatee sightings as needed, provide public awareness and outreach at MSAQ and collaborate on annual MS health assessments, satellite telemetry and mark-recapture. Expected outcomes: Years 2021-2025. Support MS manatee research and conduct annual health assessments. Benefits: Limited dedicated resources to manatees in Mississippi has resulted in a lack of data for natural resource managers for informed management. West Indian manatee sighting reports have grown in frequency along the nGOM since the 1980's, a region normally considered outside the species normal area of occupancy. The causes for the increase in manatee sightings remains unclear, but it suggests that the northern GOM is becoming a regular seasonal destination for manatees. This raises important questions as to what the ecological importance of the nGOM is to manatees and spatio-temporal patterns of manatee use in the region. This project would help answer these important questions. Enter Date 11/30/2020	Harrison	Yes	No	No	No	No	No	No		No		$ 1,000,000.00	$ -	
New	Research and Education	5972	12/8/2020	Long-term bottlenose dolphin monitoring, research and health for conservation management in Mississippi	NOAA Project ID# 14537: Objectives: Establish a long-term solution based program to answer critical questions and provide informed data about the population, health and future of bottlenose dolphins in the Mississippi Sound. Activities to be completed: Conduct annual dolphin health assessments, an essential conservation management tool for free ranging dolphins. However, before annual health assessments can be conducted, it is necessary to obtain consistent baseline data using mark-recapture via photo-identification to analyze movement patterns, size and structure of populations, survival rates, abundance and birth/fecundity rates and determination of site fidelity. Using consistent boat based photo ID surveys with robust statistical analysis, population and stock assessments can be ascertained. Mark-recapture, behavioral observations, acoustical recording during boat based surveys, and genetic testing of skin biopsy samples will provide answers to the unknown site fidelity of MSS dolphins. Once satisfactory baseline data on population and site fidelity is collected, plan annual capture and release health assessments of dolphins in the MS Sound. Expected outcomes: Years 2021-2025. Year-round boat based dolphin photo ID, acoustical recordings, collection, processing and genetic testing of skin biopsies. Year 2024-2025. Plan, secure permits and develop funding needs for annual dolphin health assessments. Benefits: With an unknown population of a MMPA protected species such as the bottlenose dolphin, regulators are challenged when faced with making management decisions. Without having baseline population data, it is impossible to understand the potential stock effects from man-made or natural disasters which could lead to the depletion or extinction of geographically distinct dolphin populations. The marine environment faces numerous natural and anthropogenic threats that can affect dolphin health. Dolphins specific to the MSS have had 2 unusual mortality events (UME) declared over the past 10 years (2019: freshwater intrusion; 2010-2014: oil spill) as well as being included in 10 Gulf wide UME's from 1992 â€" present (NOAA). In MS, data is lacking with regards to how environmental stressors are effecting health, reproduction and physiology of MSS dolphins. This project will help fill in critical knowledge gaps about bottlenose dolphins in the MSS to ensure the long-term health and conservation of this protected species. The work will be shared via outreach and education at MSAQ. Date Entered: Nov 30, 2020	Harrison	Yes	No	No	No	No	No	No		No		$ 3,000,000.00	$ -	

New	Research and Education	5973	12/8/2020	Barrier Island Shoreline Monitoring Using sUAS for Sea Turtle Stranding and Nesting	NOAA Project ID# 14536: Objectives: Utilize small unmanned aerial systems (sUAS) and sighting surveys to provide standardized monitoring, identify strandings, nesting frequency and site fidelity over the barrier islands of Mississippi. Increased monitoring, reporting and outreach efforts will reduce the year-to-year biases making stranding data more robust and useful for assessing recovery efforts. Develop a sea turtle nest monitoring program for Mississippi for the purposes of collecting baseline data that can be applied to a long-term conservation management plan. Activities to be completed: This project will utilize a combination of sUAS flown by licensed operators under the direction of researchers and boat based sight surveys to provide a much needed, efficient and non-invasive method for monitoring remote barrier island beaches. The footage from the drone can be viewed in real-time and most strandings and crawls can be spotted while flying at an altitude of 15-30 m. Expected outcomes: The boat based sUAS and sighting survey program will identify stranded sea turtles and sea turtle nest sites, the location will be marked with GPS and scientists will visit the sites for further analysis, processing, recovery of stranded animals. In lieu of a USFWS recovery permit, potential nest sites will not be disturbed but the location will be reported to USFWS, NPS (when applicable) and NOAA. Once a USFWS recovery permit is secured, nest sites will be staked and monitored by Mississippi based trained staff. Years 2021-2025. Conduct a combination of sUAS flights and boat based sight surveys during the stranding and nesting season (March â€" August) over Cat, Ship, Horn, Petit Bois, Deer and Round islands for sea turtle stranding and nesting activity. Benefits: This project will collect critical data about sea turtles in Mississippi so that conservation management initiatives can be developed. The research efforts and findings from this work will be used in public and educational outreach at Mississippi Aquarium and in relevant scientific publications. Date Entered: Nov 30, 2020	Jackson	Yes	No	No	No	No	No	No		No		$ 2,000,000.00	$ -		
New	Research and Education	5974	12/8/2020	Restoring Sea Turtles to the Blue and Beyond: Establishing Mississippi's preeminent, sea turtle rescue, rehabilitation, and education (RRE) center at the Mississippi Aquarium (MSAQ)	NOAA Project ID# 14535: MSAQ will be Mississippi's first and only Association of Zoos and Aquariums (AZA) accredited facility. Our goal is to build and open a state-of-the-art sea turtle rescue, rehabilitation, and education (RRE) center that serves as an epicenter of local sea turtle rescue and rehabilitation. The RRE will be a combined use resource that reaches 350,000 guests annually. Establishing the RRE center on MSAQ's main campus will allow guests to experience daily rescue and rehabilitation operations first-hand, including intake, triage, and advanced medical procedures. Once turtles are rehabilitated, community focused events will be established to engage the public in re-introductions of sea turtles to the gulf coast waters. Objective 1: Create infrastructure for a preeminent sea turtle rescue, rehabilitation, and education center in Mississippi - Provide a foundation for a scalable rehabilitation and rescue operation with dedicated and expert staff to care for stranded sea turtles - Space to rehabilitate a minimum of 30 turtles -Increase capacity to receive and rehabilitate turtles from AZA partners and established rescue and rehabilitation facilities nationwide -MSAQ's Animal Research Center (ARC) provides additional capacity for facility growth and can serve as an epicenter during emergency scenarios (environmental disasters, unusual mortality events, or mass stranding events) - Establish educational opportunities for aquarium guests, school groups, students, and community members Objective 2: Utilize RRE as ground zero for enhanced mortality investigations and provide early detection and response to anthropogenic threats and emergency events in Mississippi -RRE's impact on injured turtles will help compensate for injuries that occurred due to the Deep-Water Horizon oil spill -Increase capacity for local stranding response and allow for mortality investigations, addressing restorations outlined for sea turtles -Provide world class veterinary care to Mississippi's stranded turtles to reduce injuries and mortalities -MSAQ employees two veterinarians, both trained by sea turtle experts in medicine, biology, stranding, and rehabilitation. Both have worked at world-renowned facilities -Advanced medical capabilities: dedicated hospital, radiology equipment, surgical suite, endoscopy equipment, CT scanner, mobile necropsy unit, field and in-house laboratory and infectious disease diagnostic capacity -Collaborate with local and national stakeholders -Present and publish scientific findings	Harrison,, Jackson, Hancock	Yes	No	No	No	No	No	Yes		No		$ 4,000,000.00	########		
New	Research and Education	5985	6/4/2021	Enhance conservation of bottlenose dolphins in Mississippi state waters by strengthening capacity for science-based marine mammal health and management	The Mississippi Sound (MSS) is home to the nation's largest bay, sound, and estuarine (BSE) population of common bottlenose dolphins (Tursiops truncatus). The MSS serves as a nursery ground for newborn dolphin calves in the spring and summer months and provides vital foraging habitat for dolphins year-round. As a top predator, dolphins are an important sentinel species for the ecosystem. In addition, the fertile waters of the MSS also support a large recreational and commercial fishing industry and an oyster industry. The MSS is heavily impacted by freshwater inputs from large watersheds such as the Mississippi River, Pearl River, and Pascagoula River. In particular, the 2019 openings of the Bonnet Carrel Spillway introduced a substantial amount of freshwater from the Mississippi River into the Mississippi Sound, which is not normally exposed or connected to this riverine system. During this year, dolphin mortalities increased by more than three times over the yearly average from 2014-2018. Other large ecological disasters such as the Deepwater Horizon (DWH) oil spill, hurricanes, and algal blooms also affect dolphins. Therefore, effective management of dolphin health in the MSS is critical for the viability of this important species in the Gulf of Mexico, and it requires science-based decision making and interventions from experienced and qualified experts to manage this resource in the context of the economically vital MSS. To effectively and sustainably manage this vital species in the MSS over the next ten years, Mississippi State University College of Veterinary Medicine (MSU-CVM) and the Institute for Marine Mammal Studies (IMMS) have developed a comprehensive, science-based plan with the following objectives: 1) Determine the threats to dolphin health, including human interactions, in the MSS that result in strandings and mortalities. 2) Assess the environmental threats affecting dolphins and their habitat, particularly changes to water quality and salinity, pollutants, and prey availability in the natural habitats of dolphins in the MSS. 3) Estimate the abundance and distribution of the dolphin population in the MSS using line-transect methodology for stock assessments. 4) Evaluate the degree of connectivity and boundaries of the dolphin population in the MSS using photo identification to determine habitat use, site fidelity of individuals and groups within the MSS, as well as determine their movements in response to changes, including salinity. 5) Provide education and increase outreach to build capacity in Mississippi for effective management of dolphins in the MSS. By providing outreach for K-12 students and the public, and by conducting hands-on specialized education for veterinary students and undergraduate students, MSU-CVM and IMMS will build capacity in Mississippi to enable future expertise to manage the state's coastal resources.	Harrison	Yes	No	No	No	No	Yes	No		No		$ -	$ -		

New	Research and Education	5986	6/17/2021	Enhance conservation of sea turtles in Mississippi state waters by strengthening capacity for science-based animal health and management	The Mississippi Sound (MSS) is home to the most critically endangered sea turtle in the world, the Kemp's ridley (Lepidochelys kempii), along with other endangered or threatened sea turtle species such as the loggerhead (Caretta caretta) and the green sea turtle (Chelonia mydas). Juvenile Kemp's ridley sea turtles utilize the MSS for development, foraging on blue crabs that are abundant in the MSS. The green sea turtle, omnivorous at the juvenile stage, forages on sea grass beds and fish prey in this area. Loggerhead sea turtles have been documented to nest on Mississippi beaches from as early as 1990 (Hoggard 1991). In addition, the fertile waters of the MSS support a large recreational and commercial fishing industry as well as an oyster industry. The MSS is heavily impacted by freshwater inputs from large watersheds such as the Mississippi River, Pearl River, and Pascagoula River, by large ecological disasters such as the Deepwater Horizon (DWH) oil spill, and by natural events such as hurricanes and algal blooms. Therefore, effective management of turtle health in the MSS is critical for the viability of these important species in the Gulf of Mexico, and it requires science-based decision making and interventions from experienced and qualified experts to manage this resource in the context of the economically vital MSS. To manage this vital species effectively and sustainably in the MSS over the next ten years, MSU-CVM and IMMS have developed a comprehensive plan with the following objectives: 1) Conduct stranding response/rehabilitation and implement a systematic approach to identify threats to sea turtle health, including human interactions, in the MSS. This includes providing timely response to incidentally captured, stranded, and injured turtles on the Mississippi coast and a systematic approach to determining cause of death. 2) Assess the environmental threats impacting sea turtles and their habitat, including investigating changes to noise pollution, water quality, and pollutants in the habitats of turtles in the MSS. 3) Evaluate turtle movements, distribution, and habitat utilization using satellite tagging and fecal analysis. 4) Survey, document, and manage any sea turtle nesting activity on Mississippi mainland beaches. 5) Provide educational opportunities for students and conduct outreach to build capacity in Mississippi for management of sea turtles. Specialized, experiential education will be provided for veterinary students, as well as undergraduates and graduate students, to build expertise in Mississippi for coastal management, and outreach will be enhanced for K-12 students and the public to improve public awareness.	Harrison	Yes	No	No	No	No	Yes	No		No		$ -	$ -	

PROJECT ALREADY FUNDED / TO BE FUNDED / OR VETTED THROUGH PAST SELECTIONS (GREY CELLS)

Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
Workforce Development	2188	11/11/2014	Sub-bottom profile, sediment characteristics, and mapping of the shallow (<3m) water portion of Mississippi Sound aided though the use of autonomous surface boats	Critical to all four of the proposals that will be submitted by Mississippi to RESTORE is the need to know the water depth (bathymetry) and subsurface composition in Mississippi Sound (e.g., mud, sand, hard substrate). More than half of Mississippi Sound is <3m deep, restricting navigation to small, low draft vessels and severely limiting the swath width of multi-beam sonars that are typically used to map the seafloor. Even shallower are the many sites that harbor eel-grass, submerged aquatic plants, and future sites for restoration projects. While airplane-based LiDAR has been used to map shallow coastal zones, this technology is limited when waters are not clear, is expensive to conduct, and does not provide a context for subsurface type and structure. We propose a solution to this problem that affords an expansive mapping program for these shallow water areas with the resolution necessary to track temporal changes in seafloor relief and to discern substrate structure and type. To compete such operations we propose to use a fleet of autonomous instrumented (e.g., single beam sonar, navigation and communication hardware) surface boats (kayaks) that is responsive to a manned boat (e.g., Boston Whaler) with a multi-beam system and a sub-bottom chirp sonar. This automation exists (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and has been expanded upon for gradient following (e.g., Adamek et al., 2013). Multi-robot systems offer many advantages over a single system, including redundancy, coverage and flexibility. One of the key technical considerations is coordinating individual units. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation using the cluster space control technique. These ASVs are monitored by a centralized controller, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust spacing based on visual cues and bathymetric data that are relayed from the ASVs. Thus, our cluster space control approach allows one to get the best quality data in an unknown/varying seafloor terrain. Furthermore, the manned presence provides a measure of quality control for the multi-beam system and chirp sub-bottom sonar on the command vessel. We propose to fabricate 8 autonomous systems boats that will respond to a master computer on a command ship. Specifically we will use a Boston Whaler with pole mounted multi-beam and sub-bottom profiler sonars to tow the fleet of ASVs to the sites of interest. There the ASVs will be initiated and follow in formation behind the command boat. We will use Mokai â€œjet-	Jackson,Ha	Yes	Yes	Yes	20	No	Yes	Yes	No	Yes		$ 650,000.00	$ -	Equipment development and purchase
Research and Education	1260	10/1/2014	Natural Resource Enterprises - Restoring Coastal Habitats and Economies along the Mississippi Gulf Coast	Conduct a series of 6 educational workshops training coastal landowners, sports fishing guides, commercial fishers, resource agency and economic development professionals, and community leaders along the MS Gulf Coast in natural resource enterprise development and associated land & water conservation practices. We will partner with agency and organizational partners, including but not limited to MS Department of Environmental Quality, MS Department of Marine Resources, Gulf Coast Research Laboratory, MSU Coastal Extension Service, Audubon Society, and local boards of supervisors and city officials to host these training events. We will train interested landowners, sports fishing guides, and commercial fishers to develop a diversity of outdoor adventure excursions drawing outdoor enthusiasts to the Mississippi Gulf Coast. Through development of these new businesses and associated conservation, we will improve the environmental health of coastal lands, wetlands, watersheds, estuaries, and the Mississippi Sound on the MS Gulf Coast.	Hancock, Harrison, Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ 165,094.00	$ -	
Research and Education	2064	11/9/2011	Restoration Initiatives at the INFINITY Science Center	The INFINITY Science Center provides a unique opportunity to monitor the impacts of the oil spill and educate the public about coastal wetlands and the state of recovery. INFINITY is a state-of-the-art, interactive science and interpretive center under construction in Hancock County and is a gateway to 1,400 acres of upland and wetland habitats. Through hands-on activities in the Earth gallery, as well as in the field, visitors will learn about wetland plants and participate in restoring vegetation in the nearby Pearl River watershed. Nature trails to the East Pearl River, which flows into the Mississippi Sound/Gulf of Mexico, will connect with 43 miles of scenic byways in Hancock County. The INFINITY trails will provide opportunities to monitor the impact of the spill on local wetlands, native wetland bird species and wetland-dependent migratory species.	Hancock	Yes	No	No	Yes	No	Yes	No		No	Yes	$ 10,000,000.00	$ -	

	Research and Education	2188	11/11/2014	Sub-bottom profile, sediment characteristics, and mapping of the shallow (<3m) water portion of Mississippi Sound aided though the use of autonomous surface boats	Critical to all four of the proposals that will be submitted by Mississippi to RESTORE is the need to know the water depth (bathymetry) and subsurface composition in Mississippi Sound (e.g., mud, sand, hard substrate). More than half of Mississippi Sound is <3m deep, restricting navigation to small, low draft vessels and severely limiting the swath width of multi-beam sonars that are typically used to map the seafloor. Even shallower are the many sites that harbor eel-grass, submerged aquatic plants, and future sites for restoration projects. While airplane-based LiDAR has been used to map shallow coastal zones, this technology is limited when waters are not clear, is expensive to conduct, and does not provide a context for subsurface type and structure. We propose a solution to this problem that affords an expansive mapping program for these shallow water areas with the resolution necessary to track temporal changes in seafloor relief and to discern substrate structure and type. To compete such operations we propose to use a fleet of autonomous instrumented (e.g., single beam sonar, navigation and communication hardware) surface boats (kayaks) that is responsive to a manned boat (e.g., Boston Whaler) with a multi-beam system and a sub-bottom chirp sonar. This automation exists (e.g., Mahacek et al., 2009; Kitts and Mas, 2009) and has been expanded upon for gradient following (e.g., Adamek et al., 2013). Multi-robot systems offer many advantages over a single system, including redundancy, coverage and flexibility. One of the key technical considerations is coordinating individual units. We have designed and fabricated a new low-cost autonomous surface vessel (ASV) that is capable of autonomous navigation using the cluster space control technique. These ASVs are monitored by a centralized controller, implemented via a sea-based computer that wirelessly receives ASV data and relays drive commands that are monitored by humans. Humans can intervene to adjust spacing based on visual cues and bathymetric data that are relayed from the ASVs. Thus, our cluster space control approach allows one to get the best quality data in an unknown/varying seafloor terrain. Furthermore, the manned presence provides a measure of quality control for the multi-beam system and chirp sub-bottom sonar on the command vessel. We propose to fabricate 8 autonomous systems boats that will respond to a master computer on a command ship. Specifically we will use a Boston Whaler with pole mounted multi-beam and sub-bottom profiler sonars to tow the fleet of ASVs to the sites of interest. There the ASVs will be initiated and follow in formation behind the command boat. We will use Mokai â€œjet-	Jackson,Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	20	No		$ 650,000.00	$ -	Equipment development and purchase
	Research and Education	3209	11/14/2014	Oyster Reef Mapping and Habitat Monitoring -- Suggestions to Improve Commercial Yield	Oyster Reef Mapping and Habitat Monitoring â€“ Suggestions to Improve Commercial Yield Dr. Arne Diercks (USM), Dr. Ian Church (USM) and Dr. Craig Hickey (UM) Coastal habitats provide ecological, cultural, and economic value. They act as critical habitat for thousands of species, including numerous threatened and endangered species, by providing shelter, spawning grounds, and food. Oysters, a commercially harvested food source in the Mississippi Sound, are subject to many natural and man-made impacts, including storms moving sand onto the reef and barge traffic running across the reefs. While scouring by surface vessels will damage the reef structure, toxic runoff advected over the reef can cause damage to the biota living within the reef damaging or even destroying the natural ecosystem that allows these reefs to flourish and grow producing the seafood coveted by many. It is costly, time consuming and labor intensive to estimate health and shape of a single reef using conventional methods of spot sampling using small boats and oyster tongs of oyster shells on the seafloor. We propose to map one oyster reef that previously showed signs of damage, using a multibeam echo sounder, a sub bottom profiler and a side scan sonar to establish the extent of the reef and the sub bottom structure below and around the reef, to guide future culching projects. Since Oyster growth is slow, we will collect monthly passive and active acoustic time series measurements at this reef as well as at an alternate reef that is established as being healthy. Acoustic signatures of both reefs will be compared to evaluate the health status of the damaged reef. In case of natural or man-made disasters we will collect additional data to properly document the effects of these events to the reef. We propose that new culching efforts are to be directed to areas identified by sub bottom structure analyses to be likely to sustain a positive relief after culching thus providing the hard ground necessary for young oysters to grow on. An additional spatial multibeam survey of the newly culched area after will be used to evaluate the distribution of the applied dead oyster shells on the seafloor. This high resolution bathymetry data will provide spatial coverage and thickness of this material on the seafloor by subtracting pre from post culch bathymetry, with the difference in the data showing the added oyster shells. While we recommend complete coverage of MS Oyster Reefs, it is possible that regional resource managers may wish to focus on a specific resource site and the data from that study can drive models for additional sites throughout the GoM coast. Thus the budget provided represents the aforementioned sampling regime for a single site only. This project can stand-alone based on the efforts of a combined USM and UM field collection team, as well as the laboratory efforts of the USM and UM team. However, value added toxicology analyses options are also available (see Restore Project headed by Slattery, UM). Deliverables:	Hancock, St Tammany ,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 1,360,324.00	$ -	
	Research and Education	5834	8/13/2018	Incentivized use of small bar spacing TEDs in the otter trawl fishery of Mississippi	NOAA Project ID# 13913 The aim of this project is to restore sea turtle populations in the Gulf of Mexico, particularly, Kempâ€™s ridleys (Lepidochelys kempii), where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer fishery in Mississippi. The project will also increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources. Sea turtle restoration will be achieved through the incentivized use of smaller bar spacing TEDs, capable of excluding small juvenile sea turtles in the otter trawl fishery of Mississippi. In order to protect juvenile sea turtles that inhabit nearshore and inshore waters of the northern Gulf of Mexico, pending TED regulations for the skimmer trawl fishery will require TEDs with a maximum bar spacing of 3 inches, which is less than the current 4 inch maximum required for the otter trawl fishery. The skimmer trawl and inshore otter trawl fleet in Mississippi overlap operationally and likely encounter the same small turtles. This component of the project aims to incentivize the use of TEDs with 3 inch bar spacing in the otter trawl fishery in Mississippi. Date: Aug 10, 2018	Harrison, Hancock and Jackson counties	Yes	No	No	No	No	Yes	No		No		$ 540,000.00	$ -	
	Research and Education	5835	8/13/2018	Enhancing the monitoring and enforcement of TEDs in coastal Mississippi	NOAA Project ID#13912: The aim of this project is to restore sea turtle populations in the Gulf of Mexico through enhancement of their protection in Mississippi coastal waters where small juveniles overlap with the nearshore and inshore shrimp otter trawl and skimmer fishery. Sea turtle restoration will be achieved through enhancing the activities of Mississippi marine enforcement directed toward TED compliance monitoring. Restoration will be achieved by maintaining TED compliance in Mississippi coastal waters at the highest level possible. Enhancement of monitoring and enforcement of TED regulations by Mississippi marine enforcement will be achieved through increased training of marine patrol officers in proper TED inspection procedures and through targeted funding for increased TED enforcement efforts at sea. Enforcement efforts will be tracked through submission of NOAA Fisheries TED inspection forms and TED compliance data uploads to the NOAA Fisheries TED compliance database. Date Aug 10, 2018	Harrison, Hancock and Jackson counties	Yes	No	No	No	No	Yes	No		No		$ 600,000.00	$ -	
New	Research and Education	5955	12/3/2020	Enhanced sea turtle mortality investigations	This project will enhance NOAA's existing necropsy facility to expand sea turtle mortality and supplementary investigations, and meaningfully improve the collaboration through the in-person and remote participation of researchers and education staff in Mississippi and beyond. Data gathered from necropsies constitutes the most vital source of knowledge on mortality factors and sometimes represents the sole source of that information. Enhancements to the necropsy laboratory (e.g. AV technology for remote participation, ceiling-mounted examination lighting, floor drainage, safety upgrades, and height appropriate necropsy tables) would considerably improve the capacity of the facility to manage sea turtle necropsies in a sterile and collaborative environment. Upgrading the facility is a cost effective approach since it takes advantage of an existing structure. The modernized facility will serve as an important resource for the state Sea Turtle Stranding and Salvage Network by providing a collaborative, technologically advanced work environment for its constituent partners and organizations to conduct postmortem examinations of stranded sea turtles. This will allow for early detection of natural and anthropogenic mortality events such that mortality sources can be addressed more rapidly and solutions implemented wherever possible. In conjunction with the Backtracking Analysis and Mortality Mapping tool developed by NOAA researchers, these timely necropsies will also help to pinpoint the origins of these mortality sources. Necropsies conducted at this facility would also assist with sample collection and analyses for law enforcement cases enabling more rapid responses for these investigations. The proposed work will contribute significantly to the natural resource issue of restoring and protecting sea turtles species within Mississippi waters. The project would expand and improve the information collected on sources of sea turtle mortality in Mississippi.	Jackson	Yes	No	No	No	No	No	Yes		No		$ 150,000.00	$ -	

New	Research and Education	5976	12/8/2020	Mississippi Sound Oyster Shell Recycling Program-Phase 3	NOAA Project ID#14533:The Nature Conservancy recommends a ""Phase 3"" of the Mississippi Sound Oyster Shell Recycling Program, that was initially funded as Activity #8 in the 2018 Mississippi State Expenditure Plan. This project would continue implementation of the Oyster Shell Recycling Feasibility Plan that will be undertaken in ""Phase 2"" of the before mentioned project. Project components would include continued collection of oyster shell resources, engagement and training with restaurants, development of promotional materials, and planning and potential implementation for expansion to other geographic areas within the state. A three year time period is recommended for this proposal as it would allow for a robust set of data and the establishment of self-sustaining funding streams. It is strongly recommended that this project be implemented with stakeholder input in the form of a program advisory team, that has representation from relevant economic and conservation business sectors. This program will support the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region through the collection and utilization of discarded oyster shells for oyster cultch placement in the Mississippi Sound. Additionally, this proposal will continue to add data in support of the economic sustainability analysis that will be completed in ""Phase 1"". Oyster populations and subsequent harvests have decreased over time throughout the Gulf of Mexico as well as in the Mississippi Sound. There are several reasons scientists and managers have hypothesized to the lack of oyster populations including overharvesting, natural and anthropogenic disasters, water quality, as well as a reduction in oyster reef habitat. Oyster reef habitat is comprised of cultch. Cultch is a hard substrate often made up of oyster hash, shell, and other hard bottom features on which oyster larvae can attach. Managers often supplement the availability of hard substrates with additional cultch materials including limestone, crushed concrete, fossilized oyster shells, and oyster shells when available. Based on best available science, as well as anecdotal information from oyster fisherman, oyster shell is the best cultch material to use to maximize oyster larvae adherence and recruitment. However, oyster shell is a limited resource and expensive to procure. Oyster shell recycling programs have been implemented throughout the coastal United States in an effort to reuse discarded oyster shells from restaurants, festivals, and other venues. The program objective is to avoid discarding oyster shells by collecting them from these venues and reusing them as cultch material for oyster reefs in the future. However, all oyster shell	Harrison	Yes	No	No	No	No	No	No		No		$ 650,000.00	$ -	
	Workforce Development	1260	10/1/2014	Natural Resource Enterprises - Restoring Coastal Habitats and Economies along the Mississippi Gulf Coast	Conduct a series of 6 educational workshops training coastal landowners, sports fishing guides, commercial fishers, resource agency and economic development professionals, and community leaders along the MS Gulf Coast in natural resource enterprise development and associated land & water conservation practices. We will partner with agency and organizational partners, including but not limited to MS Department of Environmental Quality, MS Department of Marine Resources, Gulf Coast Research Laboratory, MSU Coastal Extension Service, Audubon Society, and local boards of supervisors and city officials to host these training events. We will train interested landowners, sports fishing guides, and commercial fishers to develop a diversity of outdoor adventure excursions drawing outdoor enthusiasts to the Mississippi Gulf Coast. Through development of these new businesses and associated conservation, we will improve the environmental health of coastal lands, wetlands, watersheds, estuaries, and the Mississippi Sound on the MS Gulf Coast.	Hancock, I	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ 165,094.00	$ -	
	Workforce Development	1679	1/21/2014	Hancock County Marsh Living Shoreline Project	We have designed and patented a system that will help control effects of sea rise. Our system will provide shoreline protection, will enhance building of habitat, and will assure land building. Designed to replace rock jetty, our new concept (Geo-TECH-Jetti) is installed above the water line, considering projected sea rise (as determined by official government determinations). Our Geo-TECH-Jetti units are filled with dredged material sourced from near the installation. Within a prepared area on top of the Geo-tech containers are RootZone Humus-filled, (RZHO), biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Our specialized method, proven in several previous deployments, ensures highly energetic and sustained plant growth, while providing shoreline force and sea-rise protection. Land building also results as these solutions continue to work efficiently, while cooperating with nature. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. The PVC stabilization devices are designed so that they can be retrieved at a future time, when it may be determined that plant rooting and accretion has been achieved and our â€œcoholdâ€ feature is no longer needed. Our proven methods allow for replacement of rock as stabilization means. Using our proven methods, we ensure rapid reestablishment of habitat. Shellfish, fin-fishes, invertebrates, and other vital coastal organisms are able to reestablish populations. Installing our Geo-TECH-Jetti units, we accomplish rapid rebuilding of the entire food-web, by providing the multiple benefits. (1) We provide protection from sea-rise. (2) We ensure rapid establishment of native plants along shorelines, making possible rapid habitat establishment. (3) Our methods assure accretion, as the long, well-set units of Geo-TECH-Jetti prevent erosion. (4) The Geo-TECH-Jetties also provide protection from surface and sub-surface oil encroachment on shorelines and into adjacent marshes. (5) Shoreline areas of land, (marshes or barrier island shores), behind the rows of Geo-TECH-Jetti units are filled with dredged material has our process continues, the filled RZH and RZHO are applied to ensure fertility. The Geo-TECH-Jetti is set in place, working from barges. Our Geo-TECH-Jetti Placement System makes it possible for us to position units efficiently, one in front of the other, and over lapping with space between them allowing existing habitat to continue functions as installation is accomplished. If it is decided that marsh or shoreline is not to be filled in some areas where Geo-TECH-Jetti are being installed, our units are set next to each other and can be used to serve as solid shoreline protection without back-filling.	Hancock	Yes	Yes	No		Yes	Yes	No	No	No		$ 6,248,000.00	$ -	
	Workforce Development	1681	1/22/2014	Hancock County Marsh Living Shoreline	After 46 acres of dredge material is installed Trident is proposing to plant approx: 802,000 native coastal grasses and plants with RZHO (compost). Placed every 2.5 feet. Monitor growth for 1 year. Hire local labor and suppliers. Project coincides with installation of the Geo-TECH-Jetti Units . Project ID #1679 Planning on budgeting for the installation of dredge fill and 46 acres of subtidal oyster reef on another project sheets.	Plaquemir	Yes	Yes	Yes		Yes	Yes	No	Yes	No		$ 2,110,000.00	$ -	
	Workforce Development	1684	2/3/2014	Hancock County Living Marsh Shoreline Project	Mitchell Marine, Inc. will use a 12" hydraulic dredge to move material from a mining area 2000 feet off the shore to fill behind manmade berms. Approximately 130,000 yards of material will be moved over the planned berm area. Mitchell Marine is located in Biloxi MS. This coincide with Project # 1679 and 1681.	Hancock	Yes	Yes	Yes		Yes	Yes	No	No	No		$ 5,923,200.00	$ -	
	Workforce Development	1691	2/3/2014	Hancock County Living Marsh Project	Propose to deploy 435 tons per acre on 46 acres to equal 20,000 tons for Oyster Cultch. The material used will be 10% oyster shell and 90% #57 limestone. All work will be done in a minimum of 4 ft. of water at mean low tide.	Hancock	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 2,469,200.00	$ -	
	Workforce Development	1720	2/6/2014	Handcock County Living Marsh Shoreline Protection	This is a add alternate to base bid. Project ID#'s 1679, 1681, 1684 and 1691. Install 600 Geo-TECH-Jetti Units fill with dredge material and on top of the Geo-tech containers are RootZone Humus-filled, (RZHO),biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. Back fill 114,000 cubic yards dredge material within 40 acres behind Geo-TECH-Jetti Units.	Hancock	Yes	Yes	No		No	No	No	No	No		$ 8,575,200.00	$ -	
	Workforce Development	1725	2/7/2014	Hancock County Living Marsh Shoreline Protection/ Oyster Clutch	This proposal coincides with project ID# 1720 has add alternate. Propose to deploy 435 tons per acre on 95 acres to equal 42,000 tons for Oyster Cultch. The material used will be 10% oyster shell and 90% #57 limestone.All work will be done in a minimum of 4 ft. of water at mean low tide.	Hancock	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 5,068,500.00	$ -	

	Workforce Development	2199	11/13/2014	BBID Bulkhead	Project Description The Harrison County Development Commission (HCDC) will construct a 950â€™ bulkhead and dock facility in the Bernard Bayou Industrial District (BBID) for companies requiring access to the BBID Industrial Seaway. The BBID is the largest industrial park in Harrison County serving over 200 companies that employ 3,000 people. The bulkhead will offer docking facilities for marine activities including boat building and repair, marine construction and other companies traversing the Intracoastal Canal and the deep waters of the northern Gulf of Mexico. Purpose of Grant Funding Continued development and economic growth of the BBID is a high priority to the Commissioners of the HCDC. The purpose of the project is to prepare a shovel ready site offering immediate access to the BBID Seaway. The 34 acre site will allow the HCDC to successfully recruit new capital investment and jobs to Harrison County. It will increase the multimodal activity for companies requiring motor freight transportation and traffic on the intracoastal and inland waterways. Marine related support services such as machine shops, construction material suppliers and equipment maintenance mechanics will directly benefit from new marine related development on the Seaway. Project Benefits -Increased capital investment in real and personal property -Higher paying jobs requiring higher skill sets -Project ready site providing immediate access to the Seaway -Site is located in a fully developed Industrial Park providing all necessary infrastructure -Provides further stabilization of the bank adjacent to Gulf Ship - one of Harrison Countyâ€™s largest employers Project Cost	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 2,000,000.00	$ -	
	Workforce Development	3243	11/18/2014	Port Bienville Industrial Park Trans-Loading Terminal Completion	HCPHC proposes to complete build-out of its trans-loading terminal facilities, thereby substantially increasing the Port's competitive advantage and ability to attract outside industry. Phase 1 and 2 of this project have been implemented and the area is now used for trans-loading material to/from rail and/or truck. This project will implement Phase 3 by developing the water front (bulkhead) and extending rail to the water. This project will improve the terminal for use in trans-loading of grain, pellets, crude oil, coal, steel, bulk liquid or other materials and will become functional for container on barge operations. The terminal will also be used to support supply vessels in the offshore industry. All of the referenced industries have considered locating at Port Bienville in the past 12 months; completion of this project will substantially increase the portâ€™s ability to secure investment from such companies.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 12,000,000.00	$ -	
	Workforce Development	3246	11/18/2014	Stennis International Airport Hangar Construction	HCPHC proposes to construct an additional two-bay, narrow-body hangar at Stennis International Airport (SIA). SIA continually receives requests for aircraft hangars. The airport has been forced to compete with military base closures, which have made facilities available at below-market rates and values. In order to remain competitive, SIA requires an additional two-bay, narrow-body hangar. Airport administration estimates that such a hangar can produce as many as 50 new jobs at the facility.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 6,000,000.00	$ -	
	Workforce Development	4257	12/8/2014	Habitat Mapping the Waters of Mississippi Sound	Benthic Mapping of the MS Sound: This project proposes to comprehensively map the Mississippi Sound using Multibeam Echo Sounders (MBES) augmented with Airborne Lidar Bathymetry (ALB) system. The underlying purpose of the project is to establish a baseline benthic habitat map of the Sound; however, the data have numerous additional uses. The data will provide measurements of pelagic biomass over various habitats and suitability of seafloor substrate to support existing or future reefs. The resulting Digital Elevation Model provides the essential boundary layer for dynamic modeling of the Sound to enhance, circulation, sediment transport, and storm surge/coastal inundation simulations. Revisit surveys to key areas can assess habitat response to natural or anthropogenic stresses, siltation, reef material subsidence, and sea level rise. The gold standard for obtaining high precision, hydrographic measurements is 100% coverage (insonification) of the sea floor using acoustic MBES. Obtaining 100% coverage of Mississippi Sound using MBES is an extensive project. Multibeam sonar covers a swath of the seabed out to a width of approximately 5 times the water depth. Figure 1 outlines the areas of the Mississippi Sound bounded by a depth contour of approximately 2 meters (black contour line). The average depth through The Mississippi Sound is less than four meters. Using the equipment currently owned by The University of Southern Mississippi, a maximum line spacing of 10 meters is required to obtain 100% coverage. Due to declining returns in shallow water and safety of navigation, a minimum survey depth of approximately 2 meters is recommended. A polygon of survey extent based on the 2 meter contour and a line spacing recommendation of 10 meters, an estimate of survey time can be established. Planning the lines in a north south orientation would allow for efficient data collection and manageable data files. The average width of Mississippi Sound is approximately 6 Nautical Miles (Nm), and with an average survey speed of 6 knots, each line of data collection will take approximately 1 hour to complete. If a line spacing of 10 meters is utilized from the Mississippi/Louisiana border to the Mississippi/Alabama border, a distance of approximately 120 km or 120000 meters, a line count of approximately 12000 lines can be then be assumed. 12000 lines each at a length of 6 Nm, equates to 72000 Nm of survey lines. Completing all lines would require 12000 hours. Other factors that need to be considered in a time estimate are transit times, turns between lines, time to obtain sound speed	Hancock,S	Yes	Yes	Yes	10	Yes	Yes	Yes	No	Yes		$ 4,515,000.00	$ -	
	Workforce Development	4264	12/19/2014	Mississippi Aquarium	This project proposes a world-class aquarium to be built along U.S. Highway 90 in Gulfport, Mississippi on a total of approximately 18 acres of land overlooking the redeveloped Jones Park and Small Craft Harbor. Depending on features, shows, and exhibits, it could be as large as 130,000 square feet, and cost in the neighborhood of $120,000,000. This facility will serve to fill the void left by the loss of the Marine Life Oceanarium and provide for a much-needed family-friendly and education-oriented tourism facility for our Gulf Coast market. Unlike many projects that seek either full funding or have no stakeholder buy-in, this proposal has been in the works for some time, with the understanding by Gulfport city leaders that in seeking support, local commitment must be demonstrated to emphasize the significance of the shared vision of making this a reality. On December 2, 2014, the City Council unanimously approved obligating $14 million of City funds toward the purchase of approximately 10 acres of land to be acquired for this project site. When combined with the County Library and CTA properties, there will be roughly 18 acres for development as a campus for this project which has the potential to also include retail, restaurant, and lodging amenities. The appeal of this location is not only the scenic overlook, but the elevation itself is more desirable than at the waterâ€™s edge. It is important to note that this section of Gulfportâ€™s downtown remains under-utilized, undeveloped, and modestly blighted. From an urban renewal standpoint, this is a home run! Obviously, the economic benefit to Gulfport and the surrounding communities can be a game changer through increased tax revenues and site leases. The Gulfport Redevelopment Commission will have developmental authority over this project, and has taken a methodical approach to performing due diligence measures in order to achieve an accurate picture of what the potential for this ambitious development represents. To that end, David Kimmel, former Construction Project Manager and Executive Director of the Georgia Aquarium, has been hired as a consultant to assess options, reach out to industry contacts, and make recommendations to guide our progress. A market assessment is currently underway with the objective of confirming the range of customer draw, anticipated number of visitors, exhibit type, animal/species features, interactive attractions, physical plant requirements, square footage size recommendations and configuration, and ticket prices our market will bear. From a partnership standpoint, we have the commitment of the Harrison County Board of Supervisors to transfer title to a parcel of land containing the old Harrison County Library building adjacent to the existing campus. Coast Transit Authority has committed to developing that structure and the adjacent underutilized parking garage into a multimodal transit station, to include visitor information and pedestrian services, bicycle rentals, and bus stop access. In conjunction with the Mississippi Department of Transportation, they are also engaged in developing support for a pedestrian tramway/crosswalk over U.S.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		############	#######	

	Workforce Development	4291	1/5/2015	MS Gulf Coast Work-Ready Community Program	Resilient communities, coastal preservation, conservation, preparedness, recovery and sustainability within any geographical region are dependent upon a strong economy and thus a highly qualified workforce. In turn, a highly qualified workforce depends upon comprehensive, coordinated, integrated and regional workforce training programs. Such workforce training programs must provide a range of skills development opportunities beginning with basic competency and employment levels and culminating with recognized credentials. To meet the workforce training program needs of the Mississippi Gulf Coast region (Harrison, Jackson and Hancock counties), the Mississippi Development Authority (MDA), in partnership with Mississippi Gulf Coast Community College (MGCCC) and Pearl River Community College (PRCC), proposes the Mississippi Gulf Coast Work-Ready Community Program. The goal of the program will be to cultivate a more highly qualified workforce on the Mississippi Gulf Coast by creating a new and innovative workforce training program within the three coastal counties. The Mississippi Gulf Coast Work-Ready Community program will be an open-entry, competency-based exit program. Open to all coastal citizens, the program will place emphasis on developmental skills training (math, reading, writing), employability skills training (interview skills, resume writing skills) and skills specific to local/regional industries. A credential that is specific to the local/regional area and its industries will be developed and offered to program participants. The program will be designed as a â€œpathways program.â€ The training program and resulting credential will position participants to undertake multiple pathways upon program exit. Participants may enter employment, may enter subsequent workforce training programs or may enter other educational programs such as, but not limited to, credit-based career and technical programs at either MGCCC or PRCC. The proposed project aligns well with Mississippi Works, an economic development initiative of the Governor of Mississippi and the workforce development goals of the GoCoast 2020 Commission. All agencies within the Mississippi workforce development structure will be sought as program partners in order to achieve the necessary and comprehensive coordination that will be required to sustain the program and insure successful employment of program participants. The program will be developed over a six-month time period and deployed in ongoing training sessions within the three coastal counties over a two-year period. Specific objectives and desired outcomes are as follows. Objective 1: Creation of an open-entry, competency-based exit training program. Activities will include working with MGCCC and	Harrison, J	Yes	No	No		Yes	Yes	No	Yes	No		$ 3,500,000.00	$ -	create new curriculum
	Workforce Development	4296	1/8/2015	Mississippi Gulf Coast Fiber Ring	Currently, the Mississippi Gulf Coast lacks a comprehensive fiber network engineered to be survivable in the event of a natural disaster and to support limitless economic development. C Spire proposes to build a redundant, survivable fiber optic ring for the Mississippi Gulf Coast to provide both a backbone network for the Coast as well as fiber connectors to commercial and residential cores across the coastal region. This network would provide the infrastructure necessary to support economic development projects of unlimited size anywhere in this region and to provide fiber Internet connectivity for existing large, medium, and small businesses as well as coastal residents.	Hancock,J	Yes	No	Yes	100	Yes	Yes	No	Yes	No		$ 20,000,000.00	$ -	
	Workforce Development	4300	1/9/2015	Creation of Pearl River Community College Campus in Hancock County	Create a campus for PRCC in Hancock County for seafood research and aero space technology. This is of utmost importance, not only for the Mississippi Gulf Coast but for the state at large. We need to develop our workforce in Hancock County.	Hancock	Yes	No	No		Yes	Yes	Yes	No	Yes		$ 15.00	$ -	
	Workforce Development	4304	1/26/2015	I-10 Connector Road - Phase 1	The Jackson County Board of Supervisors is proposing the development of a new connector road parallel to Interstate 10 between Mississippi Highway 15 and Mississippi Highway 609. The proposed route will be located north of the interstate and will provide access to existing commercial property, as well as large tracts of developable land within the corridor. The proposed I-10 Connector Road will be built initially as a three lane divided roadway with sufficient right-of-way for expansion to a five-lane section with two eastbound lanes and two westbound lanes separated by a continuous left turn lane. The new route will be functionally classified as an Urban Arterial and will provide a continuous east-west route between two state routes with interchange access to Interstate 10. The new corridor will incorporate a one mile section of Cook Road and approximately 1,100 feet of the Thomas Street right-of-ways. On the west end of the project, roughly 3,900 linear feet of new right-of-way will be acquired to provide a connection at Mallette Road and Daisy Vestry Road. On the east end, the route will diverge from the Cook Road right-of-way to connect to Tucker Road about 800 feet north of its current location. The signalized intersection at Cook Road will be relocated to the new intersection location with traffic control measures instituted at Cook Road and Tucker Road to control traffic movements. The new I-10 Connector Road will continue north for about 1,000 feet in order to connect with Seaman Road. The preliminary estimate for the construction of the initial phase is $13.7 million which includes: â€¢$5 million for Right-of-Way â€¢$8.7 million for Construction At this time, $8.75 million has been assigned to the project through the following: â€¢Federal Funds through SAFETEA-LU Legislation of 2005 â€¢Earmark in FY2008 Transportation HUD Appropriation Act â€¢Earmark in FY2009 Omnibus Appropriation Act â€¢Earmarks in FY 2010 Therefore an additional $5 Million is requested through RESTORE Act funding.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 13,700,000.00	#######	
	Workforce Development	5482	5/4/2016	USM Ocean Enterprise at the Mississippi Aquarium	Background The maritime â€¯Blue Economyâ€™ is the largest sector of Mississippi economic activity and includes shipbuilding, shipping (and related), fishing, tourism, defense (and related), and construction activities among many others. New and very large investments are being made to capitalize on this growth potential. We propose to centralize the connections between this massively important state investment with the investments the University has made in marine and fisheries research; business and entrepreneurship; construction; and trade, transportation and logistics. Need Given the magnitude of the investments made by both the state and the University, there is not a centrally located access node to intersect needs of economic development with the intellectual capacity of the University. The nation is full of examples where critical mass has been reached by providing facilities at the nexus of industry, academia and agencies; clearly, these intersections create new and exciting opportunities and push the boundary of innovation. The State of Mississippi needs such a place, and we propose a state-of-the-art facility called The University of Southern Mississippi Ocean Enterprise to be located adjacent to the Mississippi Aquarium in the heart of Mississippiâ€™s Blue Economic Development of Gulfport. Opportunity Through Ocean Enterprise, USM will develop and concentrate expertise in the areas of marine research, economic development, entrepreneurship, trade, logistics and transportation. We will place world leaders in research and education in the facility, and give them access to state and federal partners and to leaders in economic development and private industry. In the facility will be research and education spaces for training tomorrowâ€™s leaders, collaborative spaces to solve the regions most critical problems and community spaces to bring all of the citizenry to the table.	Harrison	Yes	Yes	Yes	28000000	Yes	Yes	No	Yes	Yes		$ 28,000,000.00	$ -	
	Workforce Development	5503	7/18/2016	Center of Hope	The Center of Hope "A Place Called Home" will be a facility serving homeless families and single men and women (some of them veterans) on the Coast of Mississippi in Gulfport. The Center will be a 28,500 sq ft facility, providing 120 beds, multipurpose room and kitchen, administrative offices, meeting rooms, child play/study areas and a chapel. This is a transitional housing center that will provide homeless residents a safe, secure location to get back on their feet. We will evaluate them on a case by case basis to determine their overall needs. We are partnering with several different groups and organizations to give them the tools needed so they can be productive members of society.		Yes	No	Yes		No	Yes	No	No	Yes		$ 5,700,000.00	#######	

	Workforce Development	5765	2/25/2018	Mississippi Oyster Shell Recycling Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding an oyster shell recycling program that engages Mississippi restaurants, oyster processors, and the general public to establish a recycling program that provides free oyster shell pickup, training, and drop-off locations to recycling otherwise discarded oyster shells. Oyster shells are the preferred cultch material for oyster reef restoration but due to their limited supply has been used minimally in recent restoration efforts. Alternative cultch materials have thus far proven to be largely ineffective at restoring oyster reefs in the Mississippi Sound. Funds for this project would include the procurement and management for necessary collection materials, transportation vehicles, employees, land for shell staging, and heavy equipment for shell sanitation. Similar successful projects have been implemented in other Gulf states such as Alabama, Louisiana, and Texas. The Mississippi Commercial Fisheries United, Inc. launched a successful pilot oyster shell recycling effort in 2017 that focused on collecting oyster shells at a local seafood festival; nearly 2,000 lbs of oyster shells were collected in one day. A detailed project proposal and estimated project budget for the proposed Mississippi Oyster Shell Recycling Program included as an attachment.	George,Ha	Yes	Yes	Yes		Yes	No	Yes	Yes	No		$ 300,000.00	#######	
	Research and Education	1189	11/9/2011	Round Island Lighthouse	(ORIGINAL ID#11447) This project consists of the restoration and rebuilding of the Round Island Lighthouse. A park including a visitor's center and parking for public access would be constructed surrounding the newly restored lighthouse. Project funds would include the acquisition of the land around the lighthouse as well as work to prepare, improve, and restore the lighthouse and the site.	Jackson	Yes	No	No	Yes	No	No	Yes	30	Yes		$ 9,619,000.00	#######	
	Research and Education	1196	6/23/2011	Hancock County Shoreline Stabilization and Oyster Restoration	(ORIGINAL ID#325) Coastal Environments, Inc and partners propose to fabricate and install bio-induced oyster reefs to stabilize shorelines and help restore and sustain valuable and sensitive estuarine ecosystems along coastal SW Hancock County, Mississippi. This project will stabilize up to +/- 12 miles of shoreline by restoring intertidal oyster reef habitat using a cost-efficient and effective vertical breakwater technology called ReefBlk. The ReefBlk units function as a substrate for oyster spat attachment and allow growth of an intertidal oyster reef that provides both shoreline protection and habitat for estuarine organisms. As oyster growth progresses and the reef unit becomes more dense, the bioengineered structure dampens and dissipates wave energy and protects the estuarine marsh from erosion. These proven living shoreline and erosion control methods are currently inducing the growth of bioengineered and self-sustainable living oyster reefs that expand both linearly and vertically to buffer wave action and retard erosion along estuarine shorelines in Texas, Louisiana, Alabama and Florida. High vertical profile oyster reefs also enhance species habitat diversity and provide oyster larvae for recruitment to adjacent pubic oyster grounds, thus increasing an area?s economic value as related to commercial and recreational fishing, oyster harvesting and ecotourism. Based on historical aerial photography that can be verified for the lower Hancock County area we can deduce these data: - 12 miles of ReefBLK protection (63,360 linear feet/12,672 individual ReefBLK units) in this area to restore an average of +/- 43.64 acres of marsh (+/- 3.66 acres per mile) and provide protection to +/- 5,900 acres of existing marsh. In the project are: - Linear erosion rates average from 275 ? 750 feet since 1958. Average 5.3 ? 14.5 feet per year since over that period. - Average erosional rates range from 50 ? 250 acres since 1958. Average 1 acre to 4.8 acres per year. - Some areas as much as 1,150 and 1,450 linear feet of coastline erosion in the 52 year period (specifically on the eastern facing shore of Point Clear). Average 22 ? 28 linear feet per year. CEI proposes to design, fabricate and install a patented artificial oyster reef system, ReefBlk along the shorelines of SW Hancock County, Mississippi.The overall goals of thee project include reef construction, shoreline stabilization, marsh regrowth, faunal utilization, and seagrass colonization.	Hancock	Yes	No	No	No	No	Yes	No		No		$ 12,000,000.00	$ -	
	Research and Education	1197	6/22/2011	Mississippi Gulf Coast Oyster Shell Recycling	(ORIGINAL ID#227) The objective of this project is to develop a cost effective program on the Mississippi Gulf Coast to recycle oyster shell from consumers (restaurants, shucking houses, oyster fisherman, individuals who purchase oysters by the sack, etc.) that can then be used to restore and enhance shellfish habitat destroyed or damaged as a result of the Deepwater BP Oil Spill. An effective program will require educating consumers on the importance of recycling and encouraging their participation in a program that recycles oyster shell for use in replenishing natural oyster beds and stabilizing shorelines. Suitable substrate is critical to developing a viable reef, and the substrate material (cultch) preferred by oyster larvae is oyster shell. Since the early 1900?s, agencies of the various Gulf states have been depositing cultch material, mainly native shell, on public oyster grounds to build and enhance reefs. Currently a significant amount of the shell produced by consumers is deposited in landfills. Because much more shell is removed from public oyster grounds than is returned for habitat development and enhancement, the Gulf of Mexico is experiencing a shell deficit. This project is designed to reduce that deficit by recycling shell that would otherwise end up in landfills. The additional recycled shell will then be available for current or future oyster reef and shoreline restoration projects. Developing a cost-effective program to recycle shell for use in reef-building will be crucial to coastal restoration projects in the Gulf of Mexico. Similar programs have already produced positive results in Chesapeake Bay as well as in coastal areas of North Carolina, South Carolina, New Hampshire, and Texas. The project proposed here will use information from those state programs to develop an effective program for recovering oyster shell produced by Mississippi Gulf Coast consumers.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 800,000.00	$ -	
	Research and Education	1679	1/21/2014	Hancock County Marsh Living Shoreline Project	We have designed and patented a system that will help control effects of sea rise. Our system will provide shoreline protection, will enhance building of habitat, and will assure land building. Designed to replace rock jetty, our new concept (Geo-TECH-Jetti) is installed above the water line, considering projected sea rise (as determined by official government determinations). Our Geo-TECH-Jetti units are filled with dredged material sourced from near the installation. Within a prepared area on top of the Geo-tech containers are RootZone Humus-filled, (RZHO), biodegradable containers. The RZHO-filled containers are planted with mature native marsh grasses and other select native plants. Our specialized method, proven in several previous deployments, ensures highly energetic and sustained plant growth, while providing shoreline force and sea-rise protection. Land building also results as these solutions continue to work efficiently, while cooperating with nature. Once set in place the Geo-TECH-Jetti units are stabilized with XX heavy duty PVC pipe, driven down 7 feet for firm hold, there are stainless steel rings on the bottom of units in three locations for PVC pass through. The PVC stabilization devices are designed so that they can be retrieved at a future time, when it may be determined that plant rooting and accretion has been achieved and our â€œholdâ€ feature is no longer needed. Our proven methods allow for replacement of rock as stabilization means. Using our proven methods, we ensure rapid reestablishment of habitat. Shellfish, fin-fishes, invertebrates, and other vital coastal organisms are able to reestablish populations. Installing our Geo-TECH-Jetti units, we accomplish rapid rebuilding of the entire food-web, by providing the multiple benefits. (1) We provide protection from sea-rise. (2) We ensure rapid establishment of native plants along shorelines, making possible rapid habitat establishment. (3) Our methods assure accretion, as the long, well-set units of Geo-TECH-Jetti prevent erosion. (4) The Geo-TECH-Jetties also provide protection from surface and sub-surface oil encroachment on shorelines and into adjacent marshes. (5) Shoreline areas of land, (marshes or barrier island shores), behind the rows of Geo-TECH-Jetti units are filled with dredged material has our process continues, the filled RZH and RZHO are applied to ensure fertility. The Geo-TECH-Jetti is set in place, working from barges. Our Geo-TECH-Jetti Placement System makes it possible for us to position units efficiently, one in front of the other, and over lapping with space between them allowing existing habitat to continue functions as installation is accomplished. If it is decided that marsh or shoreline is not to be filled in some areas where Geo-TECH-Jetti are being installed, our units are set next to each other and can be used to serve as solid shoreline protection without back-filling.	Hancock	Yes	No	No	No	Yes	Yes	No		Yes		$ 6,248,000.00	$ -	
	Research and Education	1681	1/22/2014	Hancock County Marsh Living Shoreline	After 46 acres of dredge material is installed Trident is proposing to plant approx: 802,000 native coastal grasses and plants with RZHO (compost). Placed every 2.5 feet. Monitor growth for 1 year. Hire local labor and suppliers. Project coincides with installation of the Geo-TECH-Jetti Units . Project ID #1679 Planning on budgeting for the installation of dredge fill and 46 acres of subtidal oyster reef on another project sheets.	Plaquemines (I think he meant to put Hancock)	Yes	No	Yes	No	Yes	Yes	Yes		Yes		$ 2,110,000.00	$ -	
	Research and Education	1684	2/3/2014	Hancock County Living Marsh Shoreline Project	Mitchell Marine, Inc. will use a 12" hydraulic dredge to move material from a mining area 2000 feet off the shore to fill behind manmade berms. Approximately 130,000 yards of material will be moved over the planned berm area. Mitchell Marine is located in Biloxi MS. This coincide with Project # 1679 and 1681.	Hancock	Yes	No	No	No	Yes	Yes	Yes		Yes		$ 5,923,200.00	$ -	

	Research and Education	1797	4/1/2014	Mississippi Dusky Gopher Frog Preservation Parcel at Tradition	Acquisition of 270-acre, currently owned by Columbus Communities, LLC, contiguous with the Desoto National Forest in central Harrison County, Gopher Frog Preservation Parcel at Tradition would serve multiple environmental purposes: a. enhance future water quality and habitat of the estuarine ecosystem comprised of the Biloxi River watershed flowing into the Biloxi Bay-Mississippi Sound, thereby aiding in the restoration of these natural resources harmed by the BP oil spill, and b. increase permanent habitat around Glen"s Pond, the primary breeding site of the Mississippi Dusky Gopher Frog (endangered species), the Red Cockaded Woodpecker (endangered species), and the Gopher Tortoise (threatened species), which, with Longleaf Pine, are important to the restoration of natural resources in the Coastal Plain. This additional habitat would likely increase the population and survivability of the MS Dusky Gopher Frog. This 270-acre parcel borders critical habitat recently designated by USFWS for the MS Dusky Gopher Frog. Approximately 100 MS Dusky Gopher Frogs breed in Glen"s Pond, in the National Forest adjacent to the parcel proposed for acquisition, making this parcel and the Desoto National Forest contiguous for ease of controlled burns and other ecosystem management techniques. Recently, USFWS has successfully hatched Dusky Gopher Fog eggs from Glen"s Pond in another pond nearby. If acquired by a state or federal agency or a land trust, the Tradition parcel could be dedicated as a perpetual preserve for aJenhancing the survivability of the MS Dusky Gopher Frog and the Gopher Tortoise, b) restoration of longleaf pine on the parcel, and c) enhancement of water quality in the estuary formed by Biloxi River, Bay of Biloxi, and Mississippi Sound. Restoring the longleaf pine ecosystem on this parcel would also create habitat for another endangered species, the Red-cockaded Woodpecker. It is our understanding that biologist from the USFWS and the Center for Biological Diversity, who have studied the MS Dusky Gopher Frog, support the acquisition of this parcel by an appropriate governmental agency or land trust to enhance the habitat, range and survivability of the MS Dusky Gopher Frog and its partner, the Gopher Tortoise, a threatened species. The Dusky Gopher Frog spends part of its life cycle in Gopher Tortoise burrows along with approximately 300 other species of animals, plants and fungi. In order to increase the chance of survivability of the MS Dusky Gopher Frog, biologists predict that by improving the quality of the additional habitat through controlled burns, relocation of Gopher Tortoises, and planting of longleaf pine, the MS Dusky Gopher Frog population from Glen"s Pond would likely increase, allowing government biologist to transfer more of the eggs or frogs that hatch in Glen"s Pond to other historically suitable habitats in the Southeastern United States, further increasing the range and survivability of this endangered species.		Yes	No	No	No	No	Yes	Yes		No		$ -	$ -	
	Research and Education	2099	8/20/2014	Remove debris in Turkey Creek from Hwy 49 West to MPC Power Line Right-of- way	In additional to debris removal from Turkey Creek, also provide an elevated access and an out door classroom for for North Gulfport 7 & 8 Grade Middle Schools and Isiah Frederick Head Start School students to study insects, collect water samples and study different species of birds and animals. Introduce Head Start students at an early stage in learning how to become better environmental stewards. Create an access point for the middle school students to safely perform these educational opportunities.	Harrison	Yes	No	No	Yes	No	No	Yes	40	No		$ 225,000.00	$ -	
	Research and Education	4257	12/8/2014	Habitat Mapping the Waters of Mississippi Sound	Benthic Mapping of the MS Sound: This project proposes to comprehensively map the Mississippi Sound using Multibeam Echo Sounders (MBES) augmented with Airborne Lidar Bathymetry (ALB) system. The underlying purpose of the project is to establish a baseline benthic habitat map of the Sound; however, the data have numerous additional uses. The data will provide measurements of pelagic biomass over various habitats and suitability of seafloor substrate to support existing or future reefs. The resulting Digital Elevation Model provides the essential boundary layer for dynamic modeling of the Sound to enhance, circulation, sediment transport, and storm surge/coastal inundation simulations. Revisit surveys to key areas can assess habitat response to natural or anthropogenic stresses, siltation, reef material subsidence, and sea level rise. The gold standard for obtaining high precision, hydrographic measurements is 100% coverage (insonification) of the sea floor using acoustic MBES. Obtaining 100% coverage of Mississippi Sound using MBES is an extensive project. Multibeam sonar covers a swath of the seabed out to a width of approximately 5 times the water depth. Figure 1 outlines the areas of the Mississippi Sound bounded by a depth contour of approximately 2 meters (black contour line). The average depth through The Mississippi Sound is less than four meters. Using the equipment currently owned by The University of Southern Mississippi, a maximum line spacing of 10 meters is required to obtain 100% coverage. Due to declining returns in shallow water and safety of navigation, a minimum survey depth of approximately 2 meters is recommended. A polygon of survey extent based on the 2 meter contour and a line spacing recommendation of 10 meters, an estimate of survey time can be established. Planning the lines in a north south orientation would allow for efficient data collection and manageable data files. The average width of Mississippi Sound is approximately 6 Nautical Miles (Nm), and with an average survey speed of 6 knots, each line of data collection will take approximately 1 hour to complete. If a line spacing of 10 meters is utilized from the Mississippi/Louisiana border to the Mississippi/Alabama border, a distance of approximately 120 km or 120000 meters, a line count of approximately 12000 lines can be then be assumed. 12000 lines each at a length of 6 Nm, equates to 72000 Nm of survey lines. Completing all lines would require 12000 hours. Other factors that need to be considered in a time estimate are transit times, turns between lines, time to obtain sound speed	Hancock, St Tammany ,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	Yes	Yes	Yes	10	Yes		$ 4,515,000.00	$ -	
	Research and Education	4293	1/8/2015	Pearl River Community College Hancock County Center	In an effort to meet the growing higher education, economic and community development needs of the citizens of Hancock County, Pearl River Community College desires to build a campus in the County. For a number of years, PRCC offered a limited number of college-level courses at John C. Stennis Space Center. As PRCC administrators searched for a more effective way to serve the area, the Hancock County Board of Supervisors and various citizens groups were also searching for ways to improve the County's higher education opportunities. Working with a coalition of governmental, education and community leaders, PRCC leased classroom and office space in a converted Wal-Mart on Highway 90 in Waveland. The new Hancock Center opened for the spring semester in 2005 and subsequently enrolled 193 students for the fall 2005 semester. Just ten days later, Hurricane Katrina's storm surge poured 8 feet of water through the building leaving it in ruins. Officials regrouped and classes resumed October 3, 2005, in portable classrooms at the Stennis International Airport. By January 2007, the newly-refurbished Hancock Center reopened and has served as many as 300 students per semester. The potential for growth is present, but a permanent campus-type facility is needed to foster this growth. The campus environment would promote program growth and the ensuing student population increases that are expected. Pearl River Community College proposes to build a free-standing campus on 20-30 acres of land in Hancock County. The facility would accommodate existing programs as well as those that are proposed for development to meet the changing economic climate in the County. The College's plan includes: (1) A classroom/administration building of approximately 50,000 square feet to house at least 20 classrooms; a library that would meet SACSCOC requirements; offices for business, admissions, financial aid and counseling services; a bookstore and small grill area and a large multi-purpose room that would serve as a meeting place for student and community groups. (2) A specialized building of approximately 22,000 square feet to house Career and Technical Education (CTE) Programs that would meet the needs of Gulf Coast and Stennis Space Center industries. (3) A maintenance building of approximately 5,000 square feet to house shipping/receiving functions as well equipment needed to maintain the campus. Cost of construction for the Hancock County Center campus is estimated at $15 million. This number is based on construction costs of $150 per square foot; road and parking lot construction; and, furniture and equipment.	Hancock	Yes	No	No	Yes	No	No	Yes	100	Yes	Higher Edu	$ 15,000,000.00	$ -	
	Research and Education	4296	1/8/2015	Mississippi Gulf Coast Fiber Ring	Currently, the Mississippi Gulf Coast lacks a comprehensive fiber network engineered to be survivable in the event of a natural disaster and to support limitless economic development. C Spire proposes to build a redundant, survivable fiber optic ring for the Mississippi Gulf Coast to provide both a backbone network for the Coast as well as fiber connectors to commercial and residential cores across the coastal region. This network would provide the infrastructure necessary to support economic development projects of unlimited size anywhere in this region and to provide fiber Internet connectivity for existing large, medium, and small businesses as well as coastal residents.	Hancock,Jackson,Harrison	Yes	No	Yes	No	Yes	No	Yes	100	Yes		$ 20,000,000.00	$ -	

	Research and Education	4297	1/8/2015	Gulfport Downtown Tourist Destination/Alley Streetscape - The Half Street Alley Project	Gulfport Downtown Tourist Destination/Alley Streetscape Project i.e. â€œHalf Street Alley Projectâ€ In the tradition of Printers Alley in Nashville, Pirates Alley and Exchange Place in New Orleans, and the Alley Station in Montgomery, AL., Gulfport, MS is seeking to develop the downtown alley between 26th Avenue and 27th Avenue into a true outdoor public entertainment and arts destination. Currently used for utility and waste removal purposes, the alley has received a design study by Tom McGilloway of the firm Mahan Rykiel Design, Baltimore, MD and Randy Wilson of Community Design Solutions, Columbia, SC., the nationâ€™s leading â€œNew Urbanismâ€Alley Redevelopment designers. The team has repurposed and designed alleys in New York City, Austin, TX, Seattle, Portland, Chicago, and Atlanta and are now focused on opportunity in Gulfport, MS. Their assessment is that the location in Historic Downtown Gulfport will have a transformational effect in the heart of the entertainment district, creating a safe, attractive and highly desirable appeal to the character of downtown. Major design queues will be to streetscape the surface with new brick pavers, drainage systems, arched signage at each entrance, various and eclectic lighting treatments, creative and unique art installations and displays, bamboo planters, benches and seating areas and dedicated areas for the restaurantsâ€™ outdoor dining areas. Also, to address a balance of utility and desirability/sanitation, the current 40-yard compactor in the alley will be replaced with a small dumpster corral that will attractively fence off four 2-yard size dumpsters that will be on casters providing ease of access for Waste Pro to remove-dump-replace the containers on a daily basis. Based on recommendations and having the endorsement of the local Director of the Department of Health, the corral area will be against one of the alley walls, fenced off on a concrete pad with sewer drainage and hot and cold water for safe clean up and maintenance of the area. This new attraction will directly increase traffic in this pedestrian friendly area to 6 locally owned restaurants that will have back door and/or courtyard access to the newly transformed â€œHalf Street Alley. The Gulfport Main Street Director will be responsible for providing outdoor dining area events, public art displays, poetry readings and musical entertainment. It will also allow for the development of new small businesses in our downtown area by creating a new synergy of art and entertainment. Currently, the alley is an eyesore, a health and safety hazard, and quite possibly the worst maintained area in all of Downtown Gulfport. With the development of â€œHalf Street Alleyâ€not only will we correct and clean up a blighted area, we will create a destination that young and old will be able to visit to view public art contests, eat, drink, be entertained and most importantly, be proud of the continued growth and rebirth of Downtown Gulfport.	Harrison	Yes	No	Yes	Yes	Yes	Yes	Yes	55	Yes		$ 1,500,000.00	#######	
	Research and Education	4300	1/9/2015	Creation of Pearl River Community College Campus in Hancock County	Create a campus for PRCC in Hancock County for seafood research and aero space technology. This is of utmost importance, not only for the Mississippi Gulf Coast but for the state at large. We need to develop our workforce in Hancock County.	Hancock	Yes	Yes	No	Yes	Yes	No	No		Yes		$ 15.00	$ -	
	Research and Education	4305	1/26/2015	A Hancock County Aerospace and Workforce Academy	Aerospace is a staple on the Mississippi Gulf Coast, despite the lack of comprehensive aerospace and industry-related training programs from both the academic and workforce training perspectives. The Pearl River Community College (PRCC), which services Hancock County, and the Hancock County Port and Harbor Commission (HCPHC) have the will, need and wherewithal to make such a comprehensive training program a reality. With PRCCâ€™s existing academic and workforce training acumen and HCPHCâ€™s land strategically located on the Stennis International Airport airfield, a very successful partnership can be formed, If it is supported by Restore Act Funding in an estimated amount of $10 million for constructing a multipurpose 43,100 sf. facility and related parking, apron and taxiway and an estimated $3.1 milion for a three-year operational start-up period. Hancock County, which is home to Stennis Space Center and Stennis International Airport, has robust aerospace activity in both the private and federal sectors with twelve industries in the private sector alone, and coast wide there are 25 aerospace industries, with an untold amount of smaller support business with industrial training needs. While there is strong sector activity, lacking are the components that would create a true industry cluster and a major factor in cluster development is the existence of a universities and colleges supportive of that activity. Once a strong industry cluster is in place, synergies are created that are hard to easily duplicate in other regions. PRCC and HCPHC wish to enhance the Gulf Coastâ€™s existing competitive advantage with the creation of an aerospace and workforce academy that would provide the academic, workforce training, and networking components that weave the threads of synergy even tighter for aerospace in Hancock County.	Hancock	Yes	No	Yes	Yes	Yes	No	Yes	15	Yes		$ 10,000,000.00	$ -	similar to ID
	Research and Education	5503	7/18/2016	Center of Hope	The Center of Hope "A Place Called Home" will be a facility serving homeless families and single men and women (some of them veterans) on the Coast of Mississippi in Gulfport. The Center will be a 28,500 sq ft facility, providing 120 beds, multipurpose room and kitchen, administrative offices, meeting rooms, child play/study areas and a chapel. This is a transitional housing center that will provide homeless residents a safe, secure location to get back on their feet. We will evaluate them on a case by case basis to determine their overall needs. We are partnering with several different groups and organizations to give them the tools needed so they can be productive members of society.		Yes	No	No	Yes	Yes	No	Yes		No		$ 5,700,000.00	#######	
	Research and Education	5535	3/2/2017	Land Between the Creeks - land acquisition	The Land Between the Creeks (LBTC) is a multi-property land acquisition opportunity in partnership with The Trust for Public Lands to permanently protect a critically important 2,320 acre site along the Pascagoula River corridor near the confluence of Red Creek and Black Creek in Jackson County, Mississippi. The Pascagoula is the largest unmodified river in the lower 48 states and is a state-designated Scenic Stewardship Stream and designated national blueway. Since 1974, government, landowners and NGO partners have collaborated to protect an 85-mile forested corridor of 72,000 acres of conservation lands along the river. If funded, this project will add 2,320 acres of well-managed working forests bordering state-designated Scenic Stewardship Streams Red and Black Creeks (major tributaries of the Pascagoula). The LBTC properties feature gently sloping, fire-managed pine uplands (including longleaf), pitcher plant flats, a 115 acre perennially flooded Cypress/Tupelo lake which boasts a multi-species rookery, and extensive bottomland hardwoods along Red and Black Creeks. The LBTC properties are one of the largest blocks of fire-maintained uplands along the protected Pascagoula River corridor. These diverse habitats benefit a number of important game and non-game species of concern. Once acquired, the LBTC properties would be owned by the State of Mississippi and managed as part of the Pascagoula River Wildlife Management Area. LBTC properties share approximately 7 miles of boundary on two sides with the Pascagoula River WMA. Acquisition of LBTC properties will provide needed recreational access to difficult to access segments of Red Creek and Black Creek as well as the state Pascagoula Wildlife Management Area's Big Swamp area.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition

	Research and Education	5536	3/6/2017	Gulf of Mexico Citizen Scientist Initiative: Development of a Mobile App for Marine Assessment (MAMA)	Introduction Advances in mobile phone technology have made it possible for citizens to contribute valuable data for ecological monitoring and scientific investigation. Citizen Scientist initiatives harness the massive numbers of people who are sportsmen and women, amateur naturalists and even the casual observer of nature, to submit observations and data that accumulate in a paralleled database. These initiatives have broadened opportunities for public participation in science and have served to â€œdemystifyâ€ the scientific process for the average citizen. Thanks to the internet and smart phones, data can be acquired, uploaded, evaluated, and accessed with amazing rapidity. Worldwide access to these data has served to encourage public participation in biological monitoring and has provided unprecedented opportunities for collaboration among scientists. There is a long history of citizen scientist involvement in biological research. Arguably, the earliest example of this involvement is the Audubon Society Christmas Bird Count that provided information to establish bird migratory patterns in the U.S. Other more recent citizen scientist initiatives include the Great Backyard Bird Count, NestWatch, the ZomBee Project, Wildlife Health Event Reporter and MERCCURI (a bacterial diversity project). Citizen scientist volunteers are being successfully employed around the world to generate databases that would be logistically impossible and prohibitively expensive for most research project budgets. In the Gulf of Mexico Citizen Scientist Initiative (GMCSI) proposal we will recruit and train citizen scientists in the use of a mobile phone app for marine assessment (MAMA) that will be developed. MAMA will allow Gulf Coast citizens and visitors to a.) upload photos, measurements, GPS location and other data regarding specimens they have captured, observed, and identified b.) submit photos of endangered/unusual specimens of fish and other marine creatures for identification, c.) track the abundance and health of fish species of interest seasonally and regionally, d.) document invasive species in Gulf waters, and e.) monitor changes in the health of coastal ecosystems and shoreline erosional changes. The curated long-term data set would be available to researchers and resource managers for scientific management. A database of this type can be an invaluable resource for assessing changes in the health of Gulf of Mexico ecosystems. Benefits of the Gulf of Mexico Citizen Scientist Initiative	Hancock, Pearl River	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 1,711,190.00	$ -	Monitoring
	Research and Education	5820	8/10/2018	Lower Pascagoula Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the lower Pascagoula River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5841	8/13/2018	Assessment of Artificial Lighting Impacts on Sea Turtles and Public Outreach on Mississippi Mainland Beaches	NOAA Project ID# 13906: Threatened and endangered sea turtles utilize the mainland beaches of Mississippi as nesting habitat. Artificial lights have been shown to reduce sea turtle nesting on otherwise suitable nesting beaches and cause disruption of the sea turtleâ€™s ability to find the sea. The first objective of this project is to conduct comprehensive nighttime lighting evaluations along the beaches of the Mississippi Gulf coastline, including Gulfport and Biloxi. The intent of the surveys is to evaluate all visible lights from the beach with respect to their potential effects on nesting and hatchling sea turtles. Lights that are illuminated and visible from the beach will be identified and evaluated (rated with respect to their potential effects on sea turtles). Based on a lightâ€™s intensity, location, distance from the beach, type of fixture and other relevant factors, recommendations will be made for corrective measures. Sub-meter accurate GPS units fitted with laser rangefinders along with digital SLR cameras will be used to precisely locate and photograph lights, enabling evaluation of their effects on sea turtles and the beach. Interactive maps will be produced showing the GPS location of each light source and the location on the beach from which they were observed. With these maps, property owners and managers will be able to click each location on the beach to bring up information about the light along with a photo of the light source. Recommendations for modifying each light to provide sufficient light for human safety and security while ensuring the light will not detrimentally affect sea turtles will be developed. We will meet with State, County, and City officials to discuss results of the comprehensive evaluation of existing lights and develop local Sea Turtle Protection Ordinances, which will include regulations addressing lighting and other activities affecting sea turtles on the beach. The second objective of the project is to provide educational outreach to patrons at beachfront casinos, resorts, and hotels. A presentation will be developed to provide the public with information on Mississippiâ€™s beach and dune ecosystem, its biota, and issues affecting the coastline. Additionally, a training program can be implemented to train City contractors to identify sea turtle crawls to avoid impacts during their normal operations (such as beach raking or concessions), as well as the appropriate organizations to contact for sea turtle and marine mammal strandings. Date: Aug 10, 218	Jackson, Harrison, and Hancock Counties	Yes	No	No	No	No	Yes	No		No		$ 175,000.00	$ -	
	Research and Education	5853	10/15/2018	Sunset Drive to Dunbar Ave Sanitary Sewer Improvements	Project consists of cleaning, videoing, addressing point repairs for damaged sewer main sections and lining of sewer main and manholes to prohibit bypass of sanitary sewer during heavy rain events. This section of sewer main is one of the oldest sections in the city and has continued to degrade over the years.	Hancock	Yes	No	No	No	No	No	Yes	100	Yes		$ 350,000.00	$ -	
	Research and Education	5854	10/15/2018	Lift Station Repair at Ramoneda St.	Project consists of pump station upgrades to include new pumps, internal wet well rehabilitation with new discharge pipes and valves, liner of wetwell and bypass valves installed near the valve box. This pump station is continually in a state of disrepair and undersized to handle existing demand. Also, during heavy rain falls the pumps are over worked causing periodic bypass of sanitary sewer into the nearby environment.	Hancock	Yes	No	No	Yes	No	Yes	Yes	100	Yes		$ 250,000.00	$ -	

	Research and Education	5865	1/7/2019	Hickory Creek Headcut stabilization	Hickory Creek, along with White Cypress Creek and Catahoula Creek, make up the upper Jourdan River Watershed. They are all downcutting, each with a nick zone that migrates upstream. The one on Hickory Creek, a half mile downstream of Caesar Necaise Road, will threaten the bridge and roadway in the not too distant future. The headcut is contained within the applicantâ€™s property. Hickory Creek, in its un-degraded state, is a sinous coastal stream that is fairly small in appearance. However, it drains a large watershed upstream of the headcut, some 35 square miles. It utilizes its floodplain to accommodate the high water flows that result from heavy rainfall events. On these occasions, the stream and the floodplain together operate as one wide, forested stream. Below the nick zone, the stream is downcut enough that it loses the ability to put floodwater out onto the floodplain. When this happens, the water blows out the banks to accommodate the flow. The resulting soil and vegetation loss is staggering. The soil loss is a large contributor to the siltation problem in Bay St. Louis. Downstream of the nick zone, at some point the stream achieves a new form of stability within its canyon. Between these two areas, a length of, say, Â½ of a mile, is a constantly moving zone of destruction. The project is to stop the upstream migration of that zone and stabilize it. It will involve creating grade control structures, probably three or so to step the stream down in an orderly fashion. It will also involve woody debris removal and some bank sloping and stabilization. Incidentally all tributaries that enter the downcut streams have to downcut as well to reach grade. There are two main tributaries and one smaller one on the applicant's property that should receive similar treatment, although on a smaller scale.	Hancock	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	5873	2/20/2019	Wolf River Weyerhaeuser Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society which is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippiâ€™s first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land owned by the Weyerhaeuser Company totaling Ã~39,028 acres, located in areas identified as crucial to establishing complete corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would continue conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County that totals approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. Ecological Value: -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as kayaking, birdwatching, fishing, and other wildlife observation -Adds to complete corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	
	Research and Education	5874	2/21/2019	MSU Northern Gulf Aquatic Food Research Center	Despite Mississippiâ€™s relatively short coastline, the Mississippi Gulf Coast produces an abundance of natural resources and economic impact. Coastal Mississippi was once renowned as â€œthe seafood capital of the world.â€ However, today approximately 90% of the fish consumed in the United States are imported. The entire Gulf Coast produces 70 percent of the nationâ€™s oysters, 69 percent of domestic shrimp and is a leading producer of domestic hard and soft-shell blue crabs. In 2014, the Mississippi seafood industry generated total economic impacts of $199 million and created 4700 jobs. As a component of this industry-wide impact, the Mississippi seafood processing industry annually produces approximately $100 million in economic impacts and supports approximately 1000 jobs in coastal counties. Gulf seafood contains many of the nutritional and taste qualities desired by consumers, including high-quality protein and vitamins, low calories and saturated fats, and high omega-3 fatty acids. Consumers have responded to these qualities by increasing seafood consumption, as reflected by a nearly 3-fold increase U.S. per capita consumption of shrimp over the past 25 years. Yet safety and quality of seafood products remain an important public health and economic issue as illustrated by water quality related beach closures and consumption restrictions associated with the Deep-Water Horizon oil spill. In addition to the oil spill, Hurricane Katrina and the opening of the Bonnet CarrÃ© Spillway have contributed to the dramatic decrease in oyster production. The Mississippi Governorâ€™s Oyster Restoration and Resiliency Council made a determination in 2015 to restore oyster reefs to promote oyster aquaculture and set a goal of 1 million sacks of annual oyster production by 2025. The increased focus on oyster restoration and aquaculture production in MS will greatly enhance the state economy. However, outbreaks of food-borne pathogens in raw oysters have produced a negative impact on oyster marketing. To successfully restore production and marketing of oysters and other seafood, research ensuring food safety and value-added utilization is needed. Additionally, catfish is the most important aquaculture product in the United States with a total production of about $400 million per year, concentrated in the mid-south coastal states. Mississippi leads in catfish production with a farm gate value of approximately $200 million. Eleven catfish fillet processing industries, with 7 in Mississippi, 2 in Alabama and 2 in Louisiana add value to catfish products. The total economic impact of the catfish processing industries is approximately $1 billion. However, to compete with imported catfish products, the USDA-ARS Research Unit in Stoneville in conjunction with the catfish processing industries have identified badly needed research areas to recover more meat, extend shelf-life and better utilize its by-products.	Harrison	Yes	Yes	No	No	No	No	Yes	100	Yes		$ 15,700,000.00	#######	
New	Research and Education	5933	5/3/2020	Audubon Coastal Bird Stewardship	NOAA Project ID#14243 Beach-nesting birds across the Gulf of Mexico encounter a wide array of challenges to successful reproduction. Because of this, a multidisciplinary, adaptive approach is needed to address ever-changing conditions and threats like human disturbance, unbalanced predator populations, habitat loss, sea-level rise, and increased storm intensity. This multifaceted approach to beach-nesting bird conservation has been proven successful in the recovery efforts of Piping Plovers on the Atlantic Coast over the last 30 years, and can be applied to many other species that still face substantial challenges and declining populations, including those along the northern Gulf of Mexico. Building on a successful foundation already created by the National Audubon Society, a sustained region-wide coastal bird stewardship program will include monitoring for reproductive success and assessing threats, community engagement, education, habitat and predator management, policy action, and law enforcement training and support. Audubon's vision for beach-nesting bird management includes buy-in from and collaboration with a coalition of partners including federal and state agencies, local municipalities, public and private land managers and other conservation organizations. Guided by the work of the Deepwater Horizon Natural Resource Damage Assessment Trustees, the Trustee Implementation Groups, and the RESTORE Council, Audubon is proposing a region-wide Coastal Bird Stewardship Program. Such a program will be able to implement most of the restoration approaches identified in the Deepwater Horizon Oil Spill Natural Resource Damage Assessment â€“ Strategic Framework for Bird Restoration Activities (June 2017) that guides the restoration efforts for birds. These approaches include the restoration and conservation of bird nesting and foraging habitat (a priority for this restoration plan), establishing or restoring breeding colonies, preventing incidental bird mortality from predators and humans, re storing and enhancing dunes and beaches, enhancing barrier and coastal islands, and protecting and conserving coastal habitats. Through a region-wide, comprehensive approach informed by local management needs, this program would maximize effectiveness, efficiency, and benefits to injured bird species. Community engagement and strategic partnerships with community leaders will be key to the success of this program. Specifically, this program will also engage youth and school groups, veterans, and diverse communities in bird conservation efforts throughout the Gulf Coast. Audubon's Coastal Bird Stewardship Program is designed to build on and unify current programs within each state, as well as the efforts from early restoration projects like the Department of the Interior's Enhanced Management of Avian Breeding Habitat Injured by Response Activities in the Florida Panhandle, Alabama and Mississippi, which was completed in 2017. The vast number of individuals, diversity of species, broad ranges of habitats and threats, and specific life history requirements of birds injured by the BP oil spill necessitate a portfolio of restoration approaches to adequately address injuries across the region. The types of activities that can be conducted via the Coastal Bird Stewardship Program		Yes	No	No	No	No	No	No		No		$ 15,000,000.00	$ -	
					PROJECT CATEGORIZED INCORRECTLY IN PORTAL (ORANGE CELLS)																

PROJECT CATEGORIZED INCORRECTLY IN PORTAL (ORANGE CELLS)

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	WORKFORCE DEVELOPMENT	ECO.RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Workforce Development	94	1/1/1900	Bayou Grand Shoreline Stabilization	The subject property is one of the last remaining contiguous tracts of land along the Mississippi's Gulf Coast of it's size. Since the oil spill in 2010, nearby residents have noticed a big decrease in vegetation, marine life, wildlife and other resources predominant throughout the property before the spill. The loss of marsh land has been proven to magnify erosion by a significant amount. The land is well positioned to become a large scale multi-use development that could provide much needed amenities to the area including boat ramps, boardwalks, piers, bike paths and other economic drivers. At the same time, our intention is to keep a large portion of the land in it's natural state and not disrupt the natural ecosystem of birds, wildlife and vegetation. The current height requirements for building on the land range from 16-18 foot above sea level. Given these minimum height requirements, most options for the land are not feasible due to capital required to abide by these mandates. Ideally, we would like to form public/private partnerships in which everyone benefits from the reshaping of the land through infrastructure improvements (water, roads, etc.) and shoreline and marsh restoration. If these costs are not substantiated, it would be in the best interests for the allocation be set aside to purchase the land for government use. With it's close proximity to Gulf Islands National Seashore, the property would be ideal for a multitude of uses including public access, recreation, outreach, research & education and economic development.	Jackson	Yes	Yes	Yes	20	Yes	No	Yes	No	Yes		$ 7,350,000.00	$ -	
	Workforce Development	96	10/31/2013	Pass Christian - East Harbor Expansion Improvements/Enhancements	The City of Pass Christian is currently constructing a harbor that is funded via CDBG (economic development - must create 50 jobs in 3 years), CIAP grant and BP block grant. The 22+ acre harbor basin, dredged to 10 ft. depth, includes 164 recreational and commercial boat slips, 96 truck/trailer parking slips, 215 automobile parking slips, 4 tractor/trailer slips, 4 publicly accessed boat ramps, landscaping, water/sewer and electrical infrastructure and 2 public restroom facilities. An elevated access structure along the east breakwater perimeter allows public access for fishing and will serve as base of operations for commercial seafood operations. Additional items include signage denoting protected and endangered species and public information regarding invasive aquatic species and how to prevent spreading. The design includes approximately 240 recreational and commercial slips but approximately 75 slips were bid as alternates due to funding constraints. Additional items designed and bid as alternates are a splash pad/spray park, pier for commercial operations related to shrimp off-loading, additional public restrooms and improvements to existing harbor area serving commercial operations. Additional items to consider funding include public laundry facilities for transient boaters and handrails along southwest breakwater that will allow public access. The project is designed to meet clean marina program criteria. Construction completion at 10/31/13 is approximately 50%.	Harrison	Yes	No	Yes		Yes	Yes	Yes	No	Yes	commercia	$ 3,500,000.00	$ -	
	Workforce Development	1203	6/5/2013	Land Purchase for Port Bienville	(ORIGINAL ID#11996) Land purchase for future expansion at Port Bienville Industrial Park FACTS: PBIP's ideal geographical location constantly piques the interest of both current and future industries for expansion and location. Due to this increased interest raw vacant land is becoming a valuable commodity. The lack of populous neighborhoods around PBIP has always been a major inducement factor in industries locating at the port. This allows industries to expand without the worry of encroaching on residential communities. JUSTIFICATION: PBIP currently has only one large tract of vacant land (approx ... 400 acres) left for development. This parcel has basically been put on "hold" due to the interest expressed by an existing industry for future potential expansion. PBIP has no other large tracts of land to offer industry. The few remaining parcels, that are not in wetlands protected areas, are 20-25 acres in size. Normally industries look to 100 acres or more for new constr uction or expansion. REMEDY: Currently parcels to the east and north abutting PBIP have been identified as suitable areas for acquisition for future development. Due to their location the environmental impact for development on these parcels would be minimal. The parcels of interest also border our current rail spur making it an ideal location for location of industry with minimal cost of rail expansion.	Hancock	Yes	No	No		No	No	No	No	No		$ 1.20	$ -	
	Workforce Development	1254	11/22/2013	Marinovich plan to restore the gulf shrimp	Shrimp migrate in from the gulf three times a year.Research need to be done to establish when the shrimp move into the estuaries. On this bases the adult shrimp needs protecting when they move up out of the gulf to spawn. As a net maker I see this happen three times a year. Letting the shrimp spawn correctly will increase the juvenile release from the estuaries.(Letting the eggs, larvae juvenile and adult shrimp come safety into the estuaries without being caught by the shrimp trawls.) When we have maximum spawn we will have maximum juvenile release when the conditions are correct in the estuaries. This will help the ecology (example, more shrimp to feed fish etc.). Over time the shrimp population will increase and there will be more food for the whole ecology. After the migration is established then the law must be fixed in order to protect the shrimp from the nets when they are spawning. This involves changing the opening and closing of the shrimping season. The Marinovich Plan was researched twenty years ago and the shrimpers about 80 percent agreed to it. The Marinovich Plan has the dates when the shrimp spawn because it happen every year; but it has to be proven to the scientific community. Thank you for opportunity to make this proposal. Let work together to save the food for the gulf ecology.	Harrison, J	Yes	Yes	No		Yes	Yes	Yes	Yes	No		$ -	$ -	
	Workforce Development	1261	12/4/2013	Mississippi Gulf Coast Arboretum Trail --Coastal Arboretums for Restore Canopy and Reduce Injury	The MS Urban Forest Council is a 30 year old nonprofit organization that works with community leadership and citizen to establish healthy tree canopies. We have the only arboretum program in the state and have been certifying arboretums in Ms for over 10 years. This project addresses community resilience, injury, restoring canopies, economic development, tourism benefits and much more. This project has two phases. Phase I of developing arboretums along the MS Gulf Coast will include 3 arboretum, one per county. The project is to scale, landscape level,easily managed, no land acquisition and shovel ready. We can have trees in the ground as early as six months after approval. This project will fully develop local public green spaces into arborvitae creating a network of linear green spaces. This project has multiple benefits - Community resilience, job training, eco-tourism, economic development, recreation, social and ecological benefits, water quality and storm mitigation, and other benefits. This project will be phase one on creating quality green spaces in the three coastal counties. Three sites (one per county) will be created another 10-20 existing sites will be identified and certified as arboretums. Phase II will include developing an arboretum for every coastal city, (12) sites. In all, a total of 15 arboretums developed and another 15 existing sites that can qualify as an arboretum will be certified. So when the project is complete there will be a minimum of 30 certified arboretums along the coast that can be linked as green way, tourism and promotion of communities and other sites. The arboretum will be included on a GPS system so that citizens and visitors can visit and view these sites. These sites will be highly visible. The value of related water quality functions will be determined for these sites based on i-Tree formulas. The project has four basic components. 1. The key objective is to establish healthy Ms Gulf Coast Arboretae in every city in the 3 counties of the Mississippi Gulf Coast; Harrison, Hancock and Jackson. 2. MUFC already has an established and working network of communities on the Ms Gulf Coast through the Scenic Communities and Tree City USA programs. We will work in partnership with local communities, other organizations and counties to plant perpetual green spaces, and provide management training, job training, and all resources to create sustainable green spaces. There are identified spaces on the coast that will remain forever green. Identified by the Gulf Legacy Inventory and the proposed urban tree canopy inventory. We will combine our efforts with other restore projects to add the urban forestry element. We will provide training and other skills,	Hancock, H	Yes	Yes	Yes		Yes	Yes	No	No	Yes	water qua	$ 420,000.00	########	

	Workforce Development	1265	12/4/2013	Restoration of the Gulf Coast Ecosystems	We represent companies and associations who welcome the nation to enjoy our seafood, one of a kind culture and world-class fisheries, beaches and tourist destinations, as well as the wide spectrum of firms poised to conduct future ecosystem restoration projects. As such, we encourage the use of funds from the recently passed RESTPRE the Gulf coast Act to create local job and training opportunities, strong communities, and long-term economic health by investing in the restoration of the Gulf's wetlands, oyster reefs and barrier islands. Gulf Coast ecosystems are an important economic driver for our state and our regional economy, helping us to provide critical services and products needed to drive job creation, including: - Production of 1.3 billion pounds of seafood annually --- with dockside value of $661 million; - Supporting the largest remaining wild oyster harvest in the world; - Attracting more than 23 million recreational fishing trips annually; and - Providing more than 600,000 jobs and $9 billion in wages annually in tourism and recreation. Healthy wetlands, barrier islands and oyster reefs also mitigate the impacts of hurricanes and other extreme weather events on our communities and other coastal assets. The annual losses associated with these events are currently estimated at approximately $17 billion. Thanks to the resources made available through the RESTORE Act, there is an unprecedented opportunity to restore the Gulf, to strengthen our traditional industries, create new economic mobility and accelerate emerging markets centered on environmental restoration. Costal restoration projects will create new business for a wide variety of firms in the engineering, construction, transportation, and manufacturing sectors, generating demand for more workers across these sectors. As a result, there will be new opportunities for employment of Gulf Coast residents, which will increase as innovative technologies are developed and exported out of the region. Further, the restoration of the Gulf of Mexico will draw more visitors to our beaches and towns, promote thriving fisheries, and make our communities more resilient in the face of future storms and sea level rise. These benefits can only be realized with a significant investment of RESTORE Act funds into ecosystem restoration projects. A recent study conducted by Mather Economics estimated that investing these oil spill penalty funds into ecosystem restoration projects could create 77,453 new jobs over 50 years. We, therefore, encourage you to invest a substantial amount of the oil spill penalty funds from the RESTORE Act into these types of projects, which will reap the maximum benefits for the long-term prosperity of our region. Additionally, we believe it is good public policy for firms involved in ecosystem restoration projects to work in partnership with	Hancock, I	Yes	Yes	No		Yes	No	Yes	Yes	Yes		$ -	$ -	
	Workforce Development	1589	8/2/2011	Maritime & Seafood Industry Museum Expansion with Restoration Initiatives	(ORIGINAL ID#761)The Maritime & Seafood Industry Museum located on Pt. Cadet, Harrison County, Biloxi, MS serves as a welcoming beacon to the great City of Biloxi, an educational tool and a superior exhibit, for residents and visitors of the Mississippi Gulf Coast region, and for the great state of Mississippi. The Museum was established in March 1986 to preserve and interpret the maritime history and heritage of Biloxi and the Mississippi Gulf Coast, which came to prominence more than a century ago as one of the worldâ€™s great seafood producers. Since itâ€™s opening, the Maritime and Seafood Industry Museum has become recognized for its interpretation of Mississippi Gulf Coast history, culture, and heritage. The Museum exhibits, the replicated sailing schooners, the educational programs, the schooner pier complex, and the research collections have proven invaluable to the citizenry of Mississippi as well as national and international clientele. Special programs held within the museum, has seen it featured on regional and national television. The Museum expanded another 8,000 sq. ft. in 2003 and in 2005 was destroyed by Hurricane Katrina. The new three story 20,000 sq. ft. museum reopened in August 2014 at a cost of approximately $10 million. Since 1986, the Museum has been on a steady path of accomplishment â€“ from our award-winning building to our exhibits and tools â€“ but there is much more to accomplish. Our educational and economic impact within the community, the region and the state has made the Maritime and Seafood Industry Museum a destination of enjoyment and a significant economic contributor. Our $8 million expansion would build a state of the art Exhibit Hall that will play host to world class traveling exhibits. The Museum is convinced the addition of the Exhibit Hall will elevate the Museum experience and enhance the regional economy through the distribution of admission dollars and funds raised from sponsored traveling exhibits. It would also enable the Museum a larger venue for convention space for one night events away from the Casinos. Tourism is frequently seen as a way of creating new employment opportunities in regions which have suffered from devastating hurricanes or oil spills. Mississippiâ€™s Gulf Coast has embraced the tourist industry, bringing in major casinos and support services to keep tourist engaged. Visitors stay at hotels, eat at restaurants, visit cultural sites and consume goods and services within a local economy. This serves as an economic boon to drive benefits across many other sectors. Regional museums are an important magnet to draw visitors, as they flavor the experience, present the regionâ€™s history, display their treasures and share the artistic and cultural essence of the region. Giving visitors a variety of exciting activities and events impacts their experience and ensures their return. Recently published reports from the American Alliance of Museums, show indisputable evidence that museums are true	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 7,549,904.00	$ -	
	Workforce Development	1666	1/20/2014	Three Rivers Rd Widening	Located immediately north of a 0.5 mile stretch of a four lane section of Three Rivers Rd (from Creosote Rd to Seaway Rd), the bulk of the approximately 1.25 mile stretch of Three Rivers Rd between the industrialized Seaway Rd and Dedeaux Rd is two lanes with no center turn lane. This commercial corridor is vital to the City of Gulfport economy as Three Rivers Rd provides direct access between the Gulfport-Biloxi International Airport and many commercial developments, and between the airport and Dedeaux Rd. This project seeks to widen this 1.25 mile stretch from the existing two lane road to a proposed four lanes with a center turn lane. Combined with the Dedeaux Rd widening project currently under design, with recently constructed projects, and with other already-funded design projects in the area, this project will be the last leg of 5-laning all main collector roads on the heavily-commercialized north side of the airport. The economic benefits of the road widening in this area will be realized with the potential for new businesses and tax revenues also bringing needed jobs to the area. The quality of life improvements for these businesses and local residents will be seen in less congested and safer roadways. It will also benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10. Finally, this project will improve the ability of the public and tourists to access recreational areas as there are two campgrounds on this stretch of road offering approximately 170 campsites. This project improves public access to recreational activities by providing a connecting sidewalk between Seaway Road and Dedeaux road. These pedestrian and bike paths will be the last section needed to connect the Beach all the way to the Crossroads development.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 5,000,000.00	$ -	
	Workforce Development	1671	1/20/2014	Canal Rd/28th St Elevated Tank and Water Main	Located at the intersection of 28th St and Canal Rd near the western corporate limits of the City of Gulfport, immediately north of the Naval Construction Battalion Center (NCBC) of Gulfport, this project seeks to install a new elevated storage tank to replace the existing 75,000 gallon tank in the area. This project will also provide new public water mains along Canal Rd to strengthen existing infrastructure. The proposed water tank and water infrastructure will provide more capacity and more reliable service for the City of Gulfport system. With proposed Navy Base upgrades and expansions combined particularly with the needs of the nearby Port of Gulfport expansion, upgrades to the existing water system are imperative for the City to provide adequate service to all existing and proposed customers in order to encourage not stifle economic development. This project will provide an immediate pressure and capacity upgrade to allow for uninterrupted service to existing and future customers, allowing for future business in the area resulting in more tax revenue for the City, more jobs for its citizens, and more utility customers.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 3,500,000.00	$ -	
	Workforce Development	1676	1/20/2014	MS 605/Lorraine Rd St Lighting at Seaway Island	The length of Lorraine Rd (MS 605) along Seaway Island currently has no street lights. However, both the south side and north side of Seaway Islands are well lit. This section of non-contiguous lighting on Seaway Island has created less desirable conditions for commercial development. This project proposes to install street lights along Lorraine Rd the length of Seaway Island (from Kramer Marina to Industrial Seaway). This better visibility during evenings should encourage more businesses to develop the many existing vacant lots resulting in jobs for the community and tax revenue for the City. This project will also improve the quality of life for local residents and business by increasing safety along Lorraine.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 650,000.00	$ -	

	Workforce Development	1677	1/20/2014	Gulfport Sportsplex Expansion	The City of Gulfport's Sportsplex is strategically located near the northwest corner of the busy intersection of Interstate 10 and Highway 49. The facility offers 9 multipurpose baseball/softball fields, 4 Multipurpose athletic fields (i.e. soccer), associated buildings (concessions, restrooms, maintenance, etc.), associated infrastructure, and an area leased to Gulf Islands Waterpark. In 2013, this facility directly produced nearly $100,000 in revenue and is estimated to have had a $20-$25 million total economic impact. The bulk of this impact came from the 52 tournaments across 6 different sports hosted at the Sportsplex in 2013 alone. Despite its ongoing success, the facilities size and field offering limits the types of tournaments and other opportunities it can handle. Routinely, regional tournaments consider the Mississippi Gulf Coast for its centralized location, but ultimately are relocated to competitive markets due to the lack of facilities. This proposed project consist of three concurrent phases. First, after its 14 years of operation, a growing number of repairs and improvements to existing facilities is required. Secondly, the City of Gulfport already owns enough land to add some facilities; current planning efforts consider adding: batting cage facilities, 4 soccer/multipurpose fields, 8 tennis courts, 4 baseball/softball fields, and associated infrastructure. The final step of this proposed project would be land acquisition north to Landon Road for additional expansion. This would provide the Sportsplex with the remaining area and facilities needed to expand to be truly competitive in this growing market. All portions of this work would be designed to compliment the wetlands within and adjacent to the Sportsplex with onsite mitigation possible. The opportunities associated with this project would further bolster the already notable revenues and economic impacts of Gulfport's Sportsplex. Encouraging economic development in this area will also benefit community-resilience as it is within portions of the city generally located outside the FEMA-established floodplains that are more common south of I-10. Finally, the entire Mississippi Gulf Coast would also see a significant increase in tourism with every tournament hosted.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 15,000,000.00	$ -	
	Workforce Development	1678	1/21/2014	O'Neal Rd Widening	The City of Gulfport has been experiencing rapid growth north of I-10. In order to accommodate this growth and make the area attractive to future residents and businesses, upgrades to circulation are required. One area of interest is Oâ€™Neal Rd, a major east/west thoroughfare connecting MS 605 with Hwy 49. An existing one mile stretch of O'Neal Rd between Three Rivers Rd and Flat Branch is a two lane road with no center turn lane and no curb and gutter. This project proposes to widen this heavily developed stretch to a proposed two lanes and a center turn lane with curb and gutter on both sides. This road section would then match the road section to the west from Hwy 49 to Flat Branch Creek, completing road widening between Hwy 49 and Three Rivers Rd. The quality of life improvements for commuters in this area would be realized immediately by improving traffic speeds and eliminating dangerous left-hand movements from travel lanes. Furthermore, the increased traffic flow and capacity would entice new development and provide for future tax revenues for the City. This project is vital to provide an important east/west connection between US Hwy 49 and MS 605 which will in turn decongest clogged traffic routes north of I-10. It will increase community-resilience by providing a critical link between US 49 and MS 605 for emergency evacuation preparedness. It will also benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 10,000,000.00	$ -	
	Workforce Development	1712	12/24/2015	BP for restoring the gulf fisheries	This program will address fishery management needs in the Gulf of Mexico for the commercial, CFH and the recreational anglers. This "BluePrint for Restoring The Gulf Fisheries will be lost if not funded . This program will provide help with discards of reef fish, provide Seafood for the Consumer and provide a pilot program To test a method that will allow anglers the opportunity to fish all year for red snapper and grouper. This program will also allow the opportunity to study behavioral science. This program will address accountability and sustainability of our coastal marine resource and those that rely upon the resource for food , jobs and pleasure. The programs infrastructure contain many components. This program will Include state agency's , commercial, CFH and private anglers. It will also have help from the Southeast science center with its design. A full proposal will be submitted if the council feels they are interested in a proposal that would test a license limitation for our recreational anglers. The fish would be leased from the present commercial quota so that it would not impact the regular open season. It would also collect data that is presently missing and needed inorder to have a sustainable fishery for years to come. It will cost 31/2 million to lease the fish for the pilot study. The remaining amount will be spent on outreach. Forms, Techs. Tags , PI, analysis etc.	Harrison, H	Yes	Yes	Yes	15	Yes	Yes	Yes	Yes	Yes	Data need	$ 5,000,000.00	$ -	
	Workforce Development	1735	6/13/2013	Interstate 10/Highway 57 Commerce and Technology Corridor	With over 6 miles of interstate frontage, the City of Gautier only has access to 2 interstate interchanges. At these interchanges, the only opportunity for interstate frontage development is at the northeast corner of Highway 57/Interstate 10. One large development in this area is underway and another existing development is expanding. The Bienville Medical Complex will be over 100,000 square feet with an ambulatory center, located on 16 acres of land. The City has adopted a master plan for the smart growth of this area, and requires the installation of a water tank, fiber optics and utilities in order to provide adequate levels of surface for the anticipated growth in this area. See the attached Exhibit showing the Master Plan for the area. The project will provide new streets, drainage, utilities, lighting, a multi-use pathway and recreational amenities around the existing lake, and other related improvements.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 25,000,000.00	$ -	
	Workforce Development	1781	3/21/2014	Transportation Improvements	This project will improve McClelland, Tucker, and Seaman Roads by expanding the existing roadway design. A new I-10 collector will also be constructed. McClelland Road improvements will expand the existing 2-lane to a 4-lane road in order to create a strong network of transportation routes from I-10 to the Sportsplex. Tucker Road improvements will expand the existing 2-lane to a 3-lane road between McClelland to Daisy Vestry . Seaman Road improvements will expand the existing 2-land to a 3-lane road between Tucker and Jordan. The I-10 Collector project will create a new road between tucker and the county line; this will connect the Sportsplex area to the neighboring county and D'Iberville shopping center along Promenade pkwy/Mallett Road. The goal of this project is to promote economic development through infrastructure improvements. The project will help connect tourists and tournament guest to other shopping and dining areas a well as allow for expansion of the current shopping area into Jackson County.	Jackson	Yes	No	Yes		Yes	No	No	Yes	Yes		$ -	$ -	
	Workforce Development	1784	3/21/2014	Moss Point Open-Air Market	This project will create a space near the Riverfront Community Center that will house a open-air farmers market. The amenities will include a marquee that houses stalls for venders to sell wares, a picnic area, and restroom facilities. The market will serve to showcase local artisans and small businesses, enriching the quality of life in Moss Point as well as promoting economic development along the Greenway. The market will serve as a point of interest and generate tourism. The goal of the Moss Point Open-Air Market will be to serve as an anchor in the community by providing access to fresh locally grown food, generate support for the local economy, and increase healthy lifestyle opportunities.	Jackson	Yes	No	Yes		Yes	No	No	Yes	Yes		$ -	$ -	
	Workforce Development	1787	3/21/2014	Jackson County Scenic Water Trail, North Trailhead	This trailhead project will consist of a trail head with public boating access, walking trail, heritage museum and outpost. The Carter Lake Fishing Outpost will restore Carter Lake and provide recreational fishing near the Northern Trailhead. The Pascagoula Water Trail Cultural and Research Center will create an interactive culture and science center. The cultural center will focus on the native American culture for which the region derives its name and the science center will highlight conservation effects of natural wildlife mainly the efforts of the Pascagoula Wildlife Management Area. This center will serve as the primary information center for the entire trail. The North Trailhead Walking Trails will consist of walking trails adjacent to the river trail and Research center. This provides visitors not going on the water trail a small glimpse into the natural beauty of the Pascagoula River. North Trailhead Water Craft Outfit will develop an extension service that provides kayak, canoe, and other watercraft rentals to visitors. North Trailhead Boat Launch will create a boat ramp from which visitors to the Northern Trailhead can start down the Water Trail. Pascagoula River Scenic Water Trail Campground will create a campground along the water trail open to both tents and RVs, extending the stay of visitors to the area. Old Americas Road and Cedar Creek will be improved from the existing 2-lane road to a 3-lane to handle increased traffic volume to the North Trailhead. Pascagoula River Trail Road will be constructed as a new road tying Cedar Creek to the North Trailhead.	Jackson	Yes	No	Yes		Yes	Yes	No	Yes	Yes		$ -	$ -	

	Workforce Development	1841	5/14/2014	Design and construction of overnight lodging and expanded dining capacity supporting the Marine Education Center	GCRL offers a range of over-night and short-term lodging for visiting scientists, and visiting teachers and students participating in the various programs offered by the Marine Education Center. In 2013, the availability of overnight lodging was a direct determinant of the number of participants in the Marine Education Center programs, as all available beds were filled. An ongoing economic feasibility study shows the potential for the MEC to increase its current participant numbers to double its existing capacity with the addition of appropriate lodging on the Halstead Campus. The additional of lodging at Halstead will support continued expansion of our summer field camps and teaching programs and will also provide additional capacity for conferencing and retreat programs for small science professional and academic groups. Additionally, several of the MECâ€™s educational partners have indicated a similar need for appropriate housing compatible with their program audiences. These partners include The National Park Service, The Grand Bay National Estuarine Research Reserve, the Pascagoula River Audubon Center, the Ocean Springs Chamber of Commerce, the Mary C. Oâ€™Keefe Cultural Center and the Walter Anderson Museum of Art. Partnering with these organizations provides additional housing markets and professional program growth opportunities. The construction project proposed will at accommodations for 80. The GCRL dining facility is equivalently taxed. Maximum capacity has been reached on a number of occasions in 2013. Expansion of the MEC program will require an expanded ability to feed participants commensurate with the expanded lodging capability on the Halstead Campus. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $3.345 million Annual Operation & Maintenance Cost (# years): GCRL manages its lodging on a cost recovery basis. Day rates cover custodial, power, water, sewer, maintenance/upkeep, and bedding/furniture replacement. No additional financial resources will be required to support the expanded lodging capacity. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects that lodging will provide a vehicle to dramatically expand (a) our Marine Education program, (b) the use of our facility to accommodate professional groups participating in retreats and think tank programs, and (c) expanded outreach partnerships with e.g., The National Park Service, The Grand Bay National Estuarine Research Reserve, and the Pascagoula River Audubon Center. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit USM to dramatically expand its Marine Education, outreach, and professional enhancement programs. These activities will expand the view of Ocean Springs and surrounds as a location for	Jackson	Yes	No	Yes	100	No	Yes	No	No	No		$ 3.35	$ -	
	Workforce Development	1843	5/14/2014	Development of an Aquacultured bait industry for Mississippi	The project will provide research, development, and technology transfer to develop an aquaculture-based bait industry for south Mississippi. Many recreational fishermen were severely affected by a combination of Hurricane Katrina, the BP oil spill, and increased fuel costs. Not only have many for-hire owners and operators lost their livelihoods, but so to have deck hands and live bait suppliers. To help alleviate these seafood related job losses, we propose to develop of an aquaculture-based bait industry in south Mississippi. We will do this through a three-stage approach, 1) research and development, (2) technology transfer through training, and (3) onsite extension assistance. Four species are targeted, each at a different point in the technical development. Bull minnows are the furthest along and stages 2 and 3 can be implemented immediately. Gulf white shrimp, blue crabs, and croaker all need some technology development before implementation of stages 2 and 3. Training of local commercial fisherman will be accomplished through the design and construction of demonstration systems for the rearing of bull minnows in ponds at the Lyman Fish hatchery, and bait shrimp, crabs and croaker at the Cochran Marine Aquaculture Center at the Gulf Coast Research Lab. Training will include: 1) design and function of ponds and closed-system components (how to build a system), 2) importance of appropriate filtration and a rudimentary understanding of the nitrification process, 3) water quality parameters and how to measure them, 4) â€œneed to knowâ€ facts about the biology of the species being cultured, and 5) trouble-shooting the system. Certificates of Completion will be awarded to program participants that complete the training course(s). In addition to the certificates awarded, a dedicated technical support person will work with interested individuals to help them modify and upgrade their facilities. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $1 million (2 yrs) Annual Operation & Maintenance Cost (# years): $1 million (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of an aquacultured Bait industry for Mississippi addresses economic development. The facilities for implementation of the program are already available and require only slight modifications to the ponds at the Lyman Fish Hatchery and the Cochran Marine Aquaculture Center. Once the program is fully implemented there will be a sustainable industry developed. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce	Jackson	Yes	No	Yes	50	Yes	Yes	Yes	No	No		$ 2.00	$ -	
	Workforce Development	1865	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Bird Estuary and Nature Trail	By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plants and ultimately water quality. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	Yes	80	Yes	Yes	Yes	No	Yes		$ 5,720,500.00	$ -	
	Workforce Development	1866	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Marine Education and Recreation Restoration	This project consist of a marine education center, a 9 mile kayak route and a 1 mile hiking and biking trail that will provide marine education and restore nature recreation. Identifies cypress, tupelo gum, fresh water, brackish water, saline marsh, environment through education, information and monitoring stations at strategic locations along the 9 mile route. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	Yes	40	Yes	Yes	Yes	No	Yes		$ 1,370,500.00	$ -	
	Workforce Development	1876	8/1/2014	The Economic Impact of Alternative Numeric Nutrient Criteria on Mississippi Communities	*Project Partner - Mississippi Farm Bureau Federation* Research Goal The overall goal of this research is to better understand how Alternative Numeric Nutrient Criteria (NNC) can impact Mississippi (MS) communities. We include agriculture, urban storm water, septic, municipal wastewater, industrial and state resource agencies as the affected sectors in these communities. For each sector, the cost of adapting to a newly proposed NNC will be estimated. For example, we propose to estimate the cost of such standards upon the agricultural sector including, but not limited to, row crops, specialty crops, poultry, and cattle. Total costs will then be aggregated across sectors and a regional and state level economic impact analyses will follow. The NNC to be examined in this study have been proposed by the MS Department of Environmental Quality (MDEQ) under the Environmental Protection Agency (EPA) directives. Where possible, we primarily follow the methodology for estimating costs per sector under uncertainty as described by the Florida Water Quality Coalitionâ€™s 2010 study. Research Study Area The State of Mississippi (48,434 mi2) has nine major river basins with approximately 86,000 miles of streams draining directly into the Mississippi Sound and the Gulf of Mexico, the Mississippi River and the Tombigbee River (Figure 1).The basins of the Pearl and Pascagoula Rivers and the Coastal Streams represent 41% of the Stateâ€™s area and empty directly into the Gulf of Mexico off the coast of Mississippi (Figure 1). Livestock production is the most important agricultural activity in these areas. Nutrient and bacteria from animal wastes often get into the streams resulting in different water quality problems along the inland water bodies and the coastal waters. This entire area has been ranked nationwide in the top ten and top twenty areas in need of protecting water quality from manure nutrient contaminants (Kellogg, 2000). Mississippi State University Research Team James Barnes (PI)	All MS Cos.	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 739,478.00	$ -	

	Workforce Development	2047	8/1/2011	Coastal Preserve Management Needs	This project consists of updating survey data and boundary markings throughout the Coastal Preserves. Given the current size of the Coastal Preserves (37,000 acres) and the current cost of surveys on large undeveloped parcels (approx. $50 per acre), the basic budget for this work could exceed $2 million dollars by the time additional logistics for marine work are included. This project would resurvey and mark boundaries to federal standards. Project benefits would be as follows: a. This requested budget could fund surveys of approximately 40,000 acres of current and incoming Coastal Preserves lands. Using an average parcel size of 200 acres, this would mean approximately 2,400,000 linear feet of boundary needs to be surveyed and marked. This would create employment opportunities for local surveying contractors by providing roughly 6,000 man-days of work or approximately one year of work for 25 to 40 employees of Mississippi small businesses (surveyors). b. Many management techniques needed for maintaining the long-term health of the Coastal Preserves (such as prescribed fire) require that boundaries be-well established in order to avoid unintended actions on adjoining land. For example, adjoining land in silviculture may not benefit from the same type of burning required for ecological/habitat management, and any damage, whether real or perceived, could pose a potential liability for the State.	Hancock, I	Yes	Yes	No		No	No	No	No	No	Yes	$ 2,250,000.00	$ -	
	Workforce Development	2104	4/1/2015	Conservation Demonstration Working Farm	Thanks to numerous conservation innovation practices, as stewards of the land we are doing a much better job than in the past. As urban sprawl and demands for our natural resources continues to increase, we need a forum to demonstrate these new conservation advances to the public. A working demonstration farm would not only benefit consumers of natural resources but also the producers of those resources and others. â€œThe Farmâ€would be utilized in multiple ways to exhibit conservation practices. Farmers would be shown cutting edge farming practices that would benefit the environment while at the same time benefitting their bottom line. Students will take advantage of the facility to better understand the native habitats and the methods that are being used to handle the growing use of them today. Schools will be able to expose children to where the food and fiber that they consume daily comes from and what it takes to get those products to them. Researchers will continue to explore new mechanisms that will aid in conservation. State and County officials can use the site to better understand the pleas of those who they serve. These are just a few of the services that â€œThe Farmâ€Could be of use to the public in its understanding of conservation. The CMSWCP would like the opportunity to establish a â€œConservation Demonstration Farmâ€The land would be acquired and the necessary infrastructure established. The locations would ideally consist of varied topography within a watershed basin close to a major waterways.	Harrison, I	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -	
	Workforce Development	2140	1/1/2015	Sustainable Gulf Coast Oyster Restoration and Coastal Protection using Central Oyster Hatcheries and Gulf State Remote Setting Sites	In the face of poor spat sets, low harvests and declining oyster populations, a new approach is needed to restore oysters and the communities that depend on them. We propose a comprehensive long-term oyster restoration plan that restores habitat, improves water quality, revitalizes the economy of the Gulf oyster community, replenishes living coastal and marine resources and enhances community resiliency by revitalizing the Gulf oyster industry economy. This will be accomplished by massively expanding regional oyster hatchery production capacity, establishing remote setting bases in each of the five states, working with state resource agencies in oyster restoration and stock enhancement and actively engaging university-based scientists in monitoring and adaptive management. This project will enhance and restore oyster populations throughout the region, providing significant ecosystem services (e.g., carbon sequestration, nitrogen removal, habitat for living marine resources and cultural) and encourage community resilience through long-term sustainable economic growth and job creation. The region-wide project will: 1. Use existing oyster hatchery capacity while conducting a rigorous site assessment (6 mos.) for a bio-secure mega-hatchery with the capacity to provide > 50 billion oyster eyed larvae/year (comparable to the worldâ€™s largest oyster hatcheries), with spawns specific to each state within 18 mos.; 2. Build dockside remote setting facilities in each state, capable of producing > 10 billion spat on cultch; 3. Enhance up to 180,000 acres over 9 yrs. with 500,000 spat on cultch/acre, deployed by state resource agencies; 4. Monitor the success rate through rigorous university-based monitoring program in each state, to guide state-specific adaptive management; 5. Increase the resilience of the system by adding a second bio-secure mega-hatchery in year 4; and 6. Support a long-term comprehensive regional strategic plan, evaluated by university-based researchers and resource agencies, for the industry. For this project, siting and construction of the first hatchery and the dockside remote setting facilities will be accomplished within 18 mos. Larval production will be supported for 9 yrs., with monitoring to occur during this time, with 90 billion juvenile oysters added to up to 180,000 acres of public oyster beds through the region. In addition to the potential job creation and economic benefits of the enhancement of oyster populations, this project will also provide critical ecosystem services through improved water quality, increased biodiversity, creation of more diverse habitat and cultural services provided by productive	Gulf of Me	Yes	Yes	Yes	28	Yes	No	Yes	Yes	No		############	$ -	
	Workforce Development	2155	10/27/2014	Establishment of an Algae-for-Aquaculture Center for Mississippi	PI for this Project: Dr. Gordon Cannon, Vice President for Research USM The global population is rapidly increasing and is expected to surpass nine billion by 2050. As the population continues to grow, the ability for the world to feed itself will become increasingly more difficult. Environmental factors and limitations on water, land, energy, and other vital resources will further stress food production throughout the world. New technologies that do not compete with current human food production resources and processes are urgently needed to support the growing food demand. Fish are a major source of high-protein food, and the demand for fish is increasing world-wide at a rate approximately double that of population growth. The worldâ€™s oceans, however, cannot meet the increasing demand for fish, so aquaculture production must continue to expand to bridge the growing gap between what the oceans can provide and what the world demands. High-protein fish require high-protein diets, and fishmeal, the primary source of protein in marine speciesâ€™ diets, is in short supply given that it is derived from the worldâ€™s oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the worldâ€™s oceans and does not compete with terrestrial food production is urgently needed. Algae are a promising candidate for fishmeal replacement (some species have protein levels in excess of 60%), and the State of Mississippi has the climate and resources necessary to support efficient algal biomass production. Further, the University of Southern Mississippi (USM), through its Gulf Coast Research Laboratory (GCRL) and Thad Cochran Marine Aquaculture Center (CMAC) affiliates, has the marine biology and aquaculture expertise necessary to understand algal biomass utilization and to ultimately validate algae as a fishmeal replacement in future aquaculture feeds. General Atomics (GA) proposes to team with USM to establish an algae-for-aquaculture research center to demonstrate the value of algal biomass as a high-protein ingredient in future commercial aquafeeds. A research-scale algae growth facility utilizing GAâ€™s existing technology will be constructed at USM, on or near the grounds of the GCRL. Algae strains high in protein will be the focus for research. The facility will initially utilize algae strains provided by GA, but subsequent efforts will utilize local Mississippi algae strains, after suitable isolation and optimization at GA. The algal biomass produced will be used to conduct fish feed trials at CMAC using the substantial aquaculture research infrastructure already present as well as the cell biology, marine science, and analytical support capabilities of USM. The results of initial fish feed trials will be used to modify algal strain selection and/or algal growth parameters as required to improve the overall fish health and growth rate observed in subsequent feed trials. The program will also allow USM to establish an aquafeed formulation and feed production capability	Jackson,Ha	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 12,000,000.00	$ -	
	Workforce Development	2193	11/13/2014	Mississippi Gulf Coast Marketing Campaign	The Mississippi Gulf Coast was hard hit by the 2010 Deepwater Horizon Oil Spill. While media reports and studies have centered on the environmental impact on the Mississippi Gulf Coast, we should not forget the economic impact that the spill had on the region. To that end, the Harrison County Development Commission (HCDC) is requesting $500,000 to develop a marketing campaign to be managed by the Mississippi Gulf Coast Alliance for Economic Development. Funding would provide for staff to lead the effort and would be housed in HCDC owned office space and marketing activities (eg. commercials, advertisements, etc.)	Harrison	Yes	No	No		Yes	No	No	No	No		$ 500,000.00	$ -	
	Workforce Development	2194	11/13/2014	North Harrison County Industrial Complex	The Harrison County Development Commission is requesting $4 million to assist with development costs associated with the North Harrison County Industrial Complex. The 623-acre site is located to the west of the U.S. 49 corridor linking Gulfport and Hattiesburg. To date approximately $11 million has been invested in the property to increase the number of developable acres under the management of the Harrison County Development Commission (HCDC). While the site is nearing completion additional work is needed. To make the site more marketable for large scale development an additional road is required, water and sewer must be extended to individual lots and surrounding wetlands must be mitigated.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No	Land Mitig	$ 4,000,000.00	$ -	
	Workforce Development	2206	11/13/2014	Beatline Road Widening and Expansion	The Harrison County Development Commission (HCDC) is requesting $20 million to fund the widening and extension of Beatline Road in the City of Long Beach from two lanes to three lanes. Beatline Road presently runs from the CSX Rail Line north to Interstate 10 and services the Long Beach Industrial Park, as well as, being the primary evacuation route for residents in west Harrison County. After construction, Beatline Road will extend to U.S. Highway 90, which will allow for the movement of vehicles from the beach to Interstate 10. In its current condition Beatline Road hinders the ability of HCDC to adequately market the Long Beach Industrial Park to prospects requiring the movement of large trucks from the industrial park to Interstate 10.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 20,000,000.00	$ -	

	Workforce Development	2209	11/13/2014	Harrison County Revolving Loan Fund	The Harrison County Development Commission (HCDC) is requesting $25 million to fund the creation of the Harrison County Revolving Loan Fund. The revolving loan fund (RLF) will be a gap financing measure primarily used for development and expansion of businesses. It will be a self-replenishing pool of money, utilizing interest and principal payments on old loans to issue new ones. The establishment of a RLF will provide access to a flexible source of capital that can be used in combination with more conventional sources. It will also provide a bridge between the amount the borrower can obtain on the private market and the amount needed to start or sustain a business. Eligible uses for RLF loans include: â€¢Operating capital â€¢Acquisition of land and buildings â€¢New construction â€¢Building renovation , and â€¢Machinery and equipment.	Harrison	Yes	No	No		Yes	No	No	No	No		$ 25,000,000.00	$ -		
	Workforce Development	3233	11/17/2014	Port Bienville Certified Site Development	Port Bienville has no large certified, shovel-ready sites to attract new industry. Because developing such sites is a priority for HCPHC, we have identified property adjacent to Port Bienville Industrial Park (PBIP) that is ideal for development of a certified industrial site. The property (approx. 800 acres) borders our current rail spur, minimizing the cost of rail expansion. It also abuts the portâ€™s main access roadway, Lower Bay Road. Electric, gas, water and sewer utilities are at the site, making this location an ideal property for expansion of port acreage. HCPHC proposes to acquire the site, perform all necessary cultural and environmental assessments, and mitigate impacted wetlands (if any) to create a Project Ready Certified Site at PBIP.	Hancock	Yes	No	Yes	10	Yes	No	No	No	No		$ 5,500,000.00	$ -		
	Workforce Development	3235	11/17/2014	Port Bienville Industrial Park Administration Building	HCPHC proposes to construct a multi-functional, centralized administrative building at Port Bienville Industrial Park. Port administration currently operates from separate facilities. The Railroad Department is using an old fire station and the Facilitiesâ€™ Department is operating from an office connected to their equipment shed. A centralized administrative building will eliminate the separation of the Port Management team and allow more effective department coordination and oversight. The new building would be raised above ground to mitigate possible flooding impact, while creating parking under the building. This design would require a smaller footprint and less land use . As an indirect impact, a new administration building would also allow the Port to return the fire station to its original function, thereby offering better fire protection to Port tenants.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 1,500,000.00	$ -		
	Workforce Development	3238	11/17/2014	Dredging between Pearl River Bridge and Intracoastal Waterway	Project Objective: The project objective is to shorten the route from the Intracoastal Waterway (ICW) to Port Bienville and Stennis Space Center. This will allow cargo vessels to travel from the Pearl River to the Gulf of Mexico. Activities to be Completed: The Hancock County Port and Harbor Commission (HCPHC) proposes to dredge the channel between the Pearl River Bridge to the Intracoastal Waterway.	Hancock	Yes	No	No		Yes	No	No	No	No		$ 4,000,000.00	$ -		
	Workforce Development	3244	11/18/2014	Stennis International Airport AeroTech Site Development	HCPHC proposes to completely develop an unimproved parcel owned by HCPHC into an 1,100 acre certified mega-site for use as an aerospace and technology industrial park. The Go Coast 2020 Report specifically lists this project as a priority for long-term coastal growth and recovery (Section 3. Economic Development, p. 14, "Priorities: Asset Development and Capacity"). HCPHC purchased an 1,100 acre site adjacent to Stennis International Airport for development into an aerospace technology park. Such a facility is paramount to the continued growth of the John C. Stennis Space Center, Stennis International Airport and the Mississippi Gulf Coast. Situated approximately 2.5 miles from Interstate I-10, between New Orleans and Gulfport/Biloxi, this mega site is adjacent to the Stennis International Airport runway and, with the addition of office building complexes, aircraft hangars and manufacturing facilities, promises to support jobs from Mobile, AL to Baton Rouge, LA. Utilities are in near proximity to the site; however, wetlands mitigation, site clearing and roadway and utility extension are needed to achieve site-ready status. Funds awarded through this project will be complete all cultural/environmental assessments, wetlands mitigation, site clearing, utility extensions/relocations, and any other functions required to achieve site-ready status.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 25,000,000.00	$ -		
	Workforce Development	3245	11/18/2014	Stennis International Airport Terminal Hangar Complex - Phase II	HCPHC proposes to complete Phase II of the Terminal Hangar Complex at Stennis International Airport (SIA). Construction of Phase II of the Terminal Hangar Complex will promote continued growth of nearly all aeronautical activities on the airport. Additional maintenance, line service, administrative, management and airline personnel will be hired with the expansion of these facilities.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 3,500,000.00	$ -		
	Workforce Development	3247	11/18/2014	Stennis International Airport Hangar Purchase	HCPHC proposes to purchase two (2) private hangars at Stennis International Airport (SIA). The Federal Aviation Administration (FAA) restricts activities that can occur from a private hangar at a federally funded airport. By purchasing two (2) existing hangars that are privately owned, HCPHC will remove all restrictions on economic development activities at those sites. This will quickly expand the infrastructure available at SIA and simultaneously allow HCPHC to use previously-restricted sites to attract new industry to the facility.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 1,650,000.00	$ -		
	Workforce Development	3248	11/18/2014	Port Bienville Industrial Park Webre Road Warehouses	HCPHC proposes to construct two new warehouses along Webre Road in Port Bienville Industrial Park (PBIP). This project would consist of constructing two new warehouses along Webre Road at PBIP. The Port has two existing warehouses which are presently rented leased to capacity and new and existing businesses continue to make requests and continues to receive request for additional warehouse space. Construction of two (2) new warehouses (approximately 50,000 s.f. each) would create additional space at the Port for existing tenants and would present prospective tenants with warehousing options not currently available because of limited existing capacity.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 4,500,000.00	$ -		

	Workforce Development	3249	11/18/2014	Stennis International Airport Apron Expansions	HCPHC proposes to expand three existing aprons (North, South, and Main Aprons) and construct an additional apron (West Apron) as follows, generally improving airport infrastructure for current tenants and contributing to the marketability of vacant sites: - Construct West Apron ($2,700,000) Construction of an apron on the west side of the existing runway will allow for an immediate increase in hazardous aircraft operations. This isolation pad will allow military training and hazardous air cargo handling autonomously from civilian aircraft operations. This construction will have regional economic development implications as an isolated facility like this does not exist in the region. - Expand Aircraft Apron North ($1,400,000) This expansion of the north apron would provide the property south of Texas Flat Road accessibility to the runway for development. As hangars are constructed for tenants, the expansion of this apron would offer staging and parking of aircraft working in this area. - Expand Aircraft Apron South ($1,800,000) Expanding the aircraft apron south would increase the amount of apron space that tenants could use for aircraft engine run-ups and parking of aircraft entering or exiting repair facilities. This expansion project could increase the number of aircraft that may be staged at Stennis and alleviate the problems of scheduling of aircraft due to apron space availability. - Expand Aircraft Apron Main ($1,200,000) This project would increase that area used for heavy load cargo operation at Stennis International Airport. This increase apron would allow for cargo operation and would not disrupt the operations of corporate and military aircraft operating and training at the airport.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 7,100,000.00	$ -	
	Workforce Development	3250	11/18/2014	Stennis International Airport Road Extension	HCPHC proposes to extend Fred and Al Key Road at Stennis International Airport (SIA). Fred and Al Key Road is the frontage road for SIA. Extension of this road will allow SIA to develop a 20 acre site for industrial, aerospace, or technological development. (The site is not currently accessible by road.) Improvement of this infrastructure will also open access to many acres of private property for similar investment and development.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 2,400,000.00	$ -	
	Workforce Development	3251	11/18/2014	Stennis International Airport Taxiway Expansions	HCPHC proposes to extend existing taxiways and construct additional taxiways as follows, generally improving airport infrastructure for current tenants and contributing to the marketability of vacant sites: - Extension of Taxiway C ($1,000,000) Extending Taxiway C (Charlie) west will allow the first phase of development onto the adjacent 1,100 acres available to develop an aerospace technology park. - Construction of Parallel Taxiway as an Assault Landing Strip (ALS) ($2,600,000) Construction of a parallel taxiway that can be used as an Assault Landing Strip (ALS) for C-130 Hercules aircraft will specifically support Keesler Air Force base on the Mississippi Gulf Coast and will provide an economic development opportunity for Hancock County, as C-130 aircraft from around the United States will utilize the combined existing drop zone with the assault landing strip. - Extension of Taxiway S ($1,300,000) This project would enhance the safety on the airfield tenants. Taxi-lane â€œSâ€ would enable a non-movement area excess and to connect the north and main airport apron areas. These are the primary areas used for heavy load operations and aircraft staging awaiting maintenance and repair.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 4,900,000.00	$ -	
	Workforce Development	3252	11/18/2014	Port Bienville Industrial Park Site Development	HCPHC proposes to perform site preparation activities on various sites throughout Port Bienville Industrial Park (PBIP). This project will contract cultural assessments, environmental assessments, geotechnical assessments, soil assessments, and wetlands delineations for many sites within PBIP. This project will also mitigate identified wetlands, thereby making sites immediately available for development. Increasing the availability of shovel-ready sites in PBIP will enhance the Port's ability to compete for industrial investment and development.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 9,000,000.00	$ -	
	Workforce Development	4244	11/18/2014	National Center for Strategic Planning and Emergency Response	Natural and man-made disasters are a part of this nationâ€™s landscape as evidenced dramatically on the Mississippi Gulf Coast by Hurricane Katrina and the Deepwater Horizon Oil Spill. News of other disasters, contagious diseases and national security threats is a daily occurrence. Strategic planning and preparedness is essential for the protection of life and property and quick response to and recovery from such events. To provide strategic planning and training services to communities, individuals, businesses and officials who plan and prepare for, take actions to protect against, respond to and oversee recovery from disasters and emergencies, Mississippi Gulf Coast Community College (MGCCC) proposes the â€œNational Center for Strategic Planning and Emergency Response Training.â€ With a robust focus on strategic planning and community resilience, the goal of this project is the planning, development and implementation of a comprehensive center that will provide strategic planning and training services to a local, regional and national audience. Objective 1: Planning activities shall include the establishment of an advisory team consisting of local, regional and national representatives, defining a specific mission and scope of work for the Center, identifying a physical location for the Center, and researching best practices for Center operations. Objective 1 outcomes will be a well-qualified advisory team, a mission statement and scope of work for the Center, a defined location for the Center and the identification of best practices for use in the deployment of the Center. Objective 2: Development of the Center shall consist of physical, operational and programmatic activities. Activities will include securing and equipping a physical location, hiring Center personnel, development of strategic planning methodologies, training programs, a marketing plan and other activities as required to meet the outcome of establishing an operational, National Center for Strategic Planning and Emergency Response Training. Objective 3: Implementation of the Center will focus on initiating the developed strategic planning process in the local coastal community and expanding it to other communities nationwide and on offering the identified and developed training to communities, individuals, businesses and officials who are on involved in strategic planning and the preparation for, response to and recovery from disasters at the local, regional and national levels.	Harrison, J	Yes	No	Yes	75	Yes	Yes	No	No	No		$ 20,000,000.00	$ -	

	Workforce Development	4245	11/18/2014	Air Service Development Incentives- Mississippi Gulf Coast Affordable Air Service	With significant recent consolidation in the airline industry, the competition for air service is becoming increasingly keen. Smaller markets like Gulfport-Biloxi impacted by the Gulf oil spill are competing for service against markets with much larger population bases and significant resources. Domestically, four airlines now control approximately 80% of the market share and 90% of the revenue and communities from across the country are vying for a limited amount of new service. To ensure the viability of new air service offerings at a smaller market like the Mississippi Gulf Coast, it requires a strong, collaborative public/private partnership. A combination of airport incentives, marketing programs and an initial revenue guarantee to the airline during a ramp-up period between 12 to 36 months would allow for a new city to become self-sustainable. Two examples where this type of collaborative effort has worked in the Gulfport-Biloxi market has been the addition of air service to Minneapolis/St. Paul (MSP) and Orlando-Sanford (SFB). The MSP service was started with a small revenue guarantee from the US Department of Transportation. The grant was for $350,000 and approximately $187,000 has been utilized to date bringing in service for the past three Fall seasons. This seasonal operation has contributed approximately $3 million to the local economy based on the $717 spend figure per passenger for a 3-night stay noted in the 2013 air service study. Incentives offered by the State of Mississippi also led to the initiation of recent service to Orlando-Sanford. The economic impact of adding any new service to the market is significant. The Minneapolis example above shows what a smaller seasonal program can contribute to the local economy. For an example of a larger program, if two times per week service to a new market were to be added for the period of one year utilizing the following assumptions (MD-80 aircraft 166 seats operating with a load factor of 70%) the program would generate 12,084 new passengers to the MS Gulf Coast. Using the spend figure of $717, the economic impact for that one year would be approximately $8.6 million. Project attributes * Easily Measured - Passenger numbers can be quantified and each has an average spend in the market. * Community support - Support is derived from Visit MS Gulf Coast, Gulfport-Biloxi International Airport, the casino gaming industry and the general public. * Coast-wide impact - Increases access to markets not currently flown by bringing in visitors who spend more and would not drive to the market due to distance.	Harrison	Yes	No	No		Yes	No	No	No	Yes		$ 2,500,000.00	$ -		
	Workforce Development	4258	12/10/2014	Remediation of Oil Spills and Gas Releases by Biochar Activated at Low-Temperatures	I. Introduction Biochar has emerged as a promising sorbent for recovering or containment of marine crude oil spills (Nguyen and Pignatello, 2013). Biochars are porous, and has a bulk density lower than that of seawater so that biochar particles float on seawater. Biochars contain pores with hydrophobic internal surfaces that are wetted much faster by organic compounds rather than water (Gray et al., 2014). This difference is particularly noticeable when the biochar is produced from pyrolysis at low temperatures (e.g., 370Â°C). Thus, the spilled oil can effectively fill the pores of biochar particles while water cannot. Biochar can also adsorb the dissolved oil species and remediate the contaminated seawater. Biomass is abundant in the Gulf region and biochar is usually a byproduct in biofuel production. It is therefore relatively inexpensive compared to other synthetic absorbents. Moreover, the spent biochar can be burned directly along with the absorbed oil in controlled environments for energy production. That is, there is no need to separate the absorbed oil from the biochar for their end use, and the energies of both biochar and oil can be recovered. As results of these advantages, bioochar is likely a cost-effective absorbent for remediating spilled oil. II. Necessity for Activation and Newly discovered Method Absorption is a major technology for the remediation of spilled oil and contaminated water. Sorbentâ€™s absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbentâ€™s internal pore volume and surface area. Nguyen and Pignatello (2013) reported that biochar from hardwood has a lower absorption capacity than those of many synthetic absorbents. Thus, internal pore volume of biochar has to be increased. CO2 and water are usually used to burn a fraction of carbon in generating larger pore volume during activated carbon production. Such physical absorption usually employs a temperature in the range of 600â€“1200Â°C, signifying the energy intensity required for such activation process. Recently, the Sustainable Energy and Environment (SEE) group at the University of Mississippi (UM) developed a family of new methods for biochar activation that was conducted in the temperature range 65-70Â°C. The energy throughput for the activation is much lower than the traditional methods. SEE is able to achieve a 16-fold increase in internal surface area, from 12.9 to 1890 m2/g. This activation approach is simple and requires agents that are readily available everywhere. Moreover, SEEâ€™s low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biocharsâ€™ internal surfaces. Considering these benefits of energy consumption and those		Yes	Yes	No		Yes	Yes	Yes	No	Yes		$ 300,000.00	$ -		develope product and create industry in MS
	Workforce Development	4261	12/19/2014	Convention Center Complex	Mississippi Coast Coliseum and Convention Center has a disadvantage in competing for business. Most convention center complexes offer accommodations, dining options and shopping. Since the Coast Coliseum and Convention Center does not offer additional amenities within the complex or walking distance, many groups will not consider hosting their meetings or events on the Mississippi Gulf Coast. By purchasing the 20 acre plot of land on Beach Boulevard, Mississippi Coast Coliseum and Convention Center would secure the integrity of the footprint of the complex and would be able to then offer developers a lease of the land without it being an addtional inventment to them. The Coast Convention Center and the Mississippi Gulf Coast Regional CVB would commit marketing and sales dollars toward attracting convention and meeting groups that would utilize the facility. Property value is estimated at $5,000,000. The convention center complex would: 1.Sustainable 2.Creates jobs 3.Community and private developer shared investment 4.Coast-wide impact 5.Generates new State and local tax revenues Supporting facts 1.60% of meetings and conventions that can be accommodated by Gulf Coast facilities will not even consider the MS Gulf Coast because they require a Convention Center Headquarters Hotel 2.The MGCRCVB and Coast Coliseum & Convention Center staff have tracked more than $27 million in lost potential revenue over the past 3 years due to not having a Convention Center headquarters hotel 3.Our ability to accommodate these additional meetings and conventions will expose our destination to new visitors, increase much needed midweek occupancy when these meetings and conventions are typically held and could potentially translate into an incremental $90 million in direct spending according to past research 4.This project would create permanent jobs in the hotels, dining and shopping establishment along with construction jobs.	Harrison	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 5,000,000.00	$ -		
	Workforce Development	4272	12/23/2014	Stennis International Airport Aerospace Academy	HCPHC and Pearl River Community College jointly proposed to establish an Aerospace Academy at Stennis International Airport. With the proliferation of aerospace development in the greater Hancock County region, Stennis International Airport is primed to serve as home for Mississippi's Aerospace Academy. The academy will train the next generation of aerospace workforce in Mississippi and create a tremendous competitive advantage for the stat's aerospace development efforts.	Hancock	Yes	No	Yes	100	Yes	Yes	No	No	No		$ 2,000,000.00	$ -		

	Workforce Development	4276	12/27/2014	Mississippi Coastal Heritage Restoration, Education, & Preservation Trail	Funding is requested to establish the Mississippi Coastal Heritage Trail (MCHT), a 100+ mile multi-use pathway linking coastal communities from Grand Bay National Estuarine Research Reserve to NASAâ€™s Infinity Science Center. While increasing public understanding and providing public access to natural resource interpretive sites, waterways, islands, and forests, this Trail will also provide an opportunity to educate community members and visitors about the effects of the Deep Water Horizon Oil Spill on Gulf Coast communities. MCHT will serve as an educational tool to teach about the interaction between humans and the marine environment as well as offer recreational access to a pedestrian/bikeway stretching across the historic and culturally rich Mississippi Gulf Coast. The MCHT will serve as the backbone of the physical network of cultural, historical and natural places where residents and visitors alike can connect with these places. Heritage Trails Partnership of the Mississippi Gulf Coast (HTP), highly supported by the National Park Service, is working to reconnect residents and visitors to the coastal ecosystems that surround them through recreational trails and conservation education projects. HTP is creatively fostering connections to education and tourism growth through trails and greenways while safe guarding the quality of coastal destinations. HTP has rallied all communities along the Mississippi Gulf Coast in a dialogue about creating a network made up of blueways and greenways where one did not exist. HTPâ€™s diverse Board of Directors, including community leaders of conservation, business, planning and health organizations, now leads the effort to create the Mississippi Coastal Heritage Trail (MCHT), recognized by the U.S. Department of Interior through the Americaâ€™s Great Outdoors Initiative. HTP has become a vibrant instrument for information exchange and building of interagency trust, related to trail projects, for the benefit of all coastal communities.	Hancock,H	Yes	Yes	Yes	78	Yes	Yes	Yes	Yes	Yes		$ 25,775,000.00	$ -	
	Workforce Development	4297	1/8/2015	Gulfport Downtown Tourist Destination/Alley Streetscape - The Half Street Alley Project	Gulfport Downtown Tourist Destination/Alley Streetscape Project i.e. â€œHalf Street Alley Projectâ€ In the tradition of Printers Alley in Nashville, Pirates Alley and Exchange Place in New Orleans, and the Alley Station in Montgomery, AL., Gulfport, MS is seeking to develop the downtown alley between 26th Avenue and 27th Avenue into a true outdoor public entertainment and arts destination. Currently used for utility and waste removal purposes, the alley has received a design study by Tom McGilloway of the firm Mahan Rykiel Design, Baltimore, MD and Randy Wilson of Community Design Solutions, Columbia, SC., the nationâ€™s leading â€œNew Urbanismâ€ Alley Redevelopment designers. The team has repurposed and designed alleys in New York City, Austin, TX, Seattle, Portland, Chicago, and Atlanta and are now focused on opportunity in Gulfport, MS. Their assessment is that the location in Historic Downtown Gulfport will have a transformational effect in the heart of the entertainment district, creating a safe, attractive and highly desirable appeal to the character of downtown. Major design queues will be to streetscape the surface with new brick pavers, drainage systems, arched signage at each entrance, various and eclectic lighting treatments, creative and unique art installations and displays, bamboo planters, benches and seating areas and dedicated areas for the restaurantsâ€™ outdoor dining areas. Also, to address a balance of utility and desirability/sanitation, the current 40-yard compactor in the alley will be replaced with a small dumpster corral that will attractively fence off four 2-yard size dumpsters that will be on casters providing ease of access for Waste Pro to remove-dump-replace the containers on a daily basis. Based on recommendations and having the endorsement of the local Director of the Department of Health, the corral area will be against one of the alley walls, fenced off on a concrete pad with sewer drainage and hot and cold water for safe clean up and maintenance of the area. This new attraction will directly increase traffic in this pedestrian friendly area to 6 locally owned restaurants that will have back door and/or courtyard access to the newly transformed â€œHalf Street Alley. The Gulfport Main Street Director will be responsible for providing outdoor dining area events, public art displays, poetry readings and musical entertainment. It will also allow for the development of new small businesses in our downtown area by creating a new synergy of art and entertainment. Currently, the alley is an eyesore, a health and safety hazard, and quite possibly the worst maintained area in all of Downtown Gulfport. With the development of â€œHalf Street Alleyâ€ not only will we correct and clean up a blighted area, we will create a destination that young and old will be able to visit to view public art contests, eat, drink, be entertained and most importantly, be proud of the continued growth and rebirth of Downtown Gulfport.	Harrison	Yes	Yes	Yes	55	Yes	Yes	No	Yes	Yes		$ 1,500,000.00	#######	
	Workforce Development	4370	5/28/2015	USM Gulf Park Beachfront Pier Restoration	The University of Southern Mississippi's Gulf Park campus is the state's only beachfront campus. This campus had a fishing/recreational pier extending out into the Gulf of Mexico for many years. The pier offered academic, research and recreational opportunities for students, faculty, and staff as well as local residents and tourists. Over time and as a result of storms and other harsh events, the pier eventually was overcome by the elements of nature. The purpose of this proposed project is to reconstruct this pier and once again offer the direct Gulf access that had been in place for the above mentioned Mississippi residents and other stakeholders for many years. Also, with USM's growth in the areas of marine and coastal science, this pier will be a critical academic and research resource for Mississippi's premier university marine related programs.	Harrison	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ 1,500,000.00	#######	
	Workforce Development	5386	8/11/2015	Airport Development Site Preparation	Background: It is vital for Airports to develop alternative forms of revenue. The Gulfport-Biloxi International Airport owns, and has identified three acres of land, as a premier location for future commercial development. This land is located at the entrance of the Airport adjacent to parcels that contain two hotels and a business office park. In order for this land to become appealing for future development, it is required to be elevated to a similar grade as contiguous parcels. Discussion: The project area, that is located west of two Airport Hotels, requires site preparation in order to make it â€œshovel readyâ€ The site preparation consists of the purchase of mitigation credits, clearing the area, installation of utilities, and fill to bring the area to grade with adjacent property. By using grant funds, it will entice private investment of construction that compliments the amenities for Visitors to the Mississippi Gulf Coast and also Residents of the Mississippi Gulf Coast. Summary/Benefit to Region: The Airport is a key component of the economic well-being of Southern Mississippi. Capital growth and capital investments are critical for Airports and Communities. The site preparation of the commercial site will set the stage for private investment to construct a commercial development which then equates to the growth of local jobs, taxes and alternative revenue to the airport. Project Cost: The cost for 3-acre commercial parcel site preparation is $725,151.25	Harrison	Yes	No	Yes		Yes	No	No	Yes	Yes		$ 725,151.25	$ -	
	Workforce Development	5400	9/2/2015	Pine Street Waterfront Access Road and Maritime Commerce Corridor	The Pine Street Waterfront Access Road and Maritime Commerce Corridor in East Biloxi will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. The comprehensive project goal is to improve public access to waterfront commercial, industrial and recreational venues in East Biloxi thereby stimulating the economic growth of existing marine-related commerce, such as the shrimp boat off-loading docks at St. Michael's Fuel and Ice Dock on Biloxi Bay at the foot of 5th Street. Improved access also will stimulate redevelopment of East Biloxi through new business start-ups and the expansion of tourism and recreational waterfront amenities.	Harrison	Yes	No	Yes	90	Yes	Yes	Yes	Yes	Yes		$ 20,000,000.00	#######	

	Workforce Development	5405	9/24/2015	Expansion of Blue Crab Aquaculture in Mississippi: New Economic Opportunities for Coastal Fishery Development	A reduction in blue crab harvests and the continuing decrease in numbers of juvenile blue crabs in estuaries across the Gulf of Mexico have stimulated interest in the use of hatchery-reared crabs in stock enhancement activities (should diminished recruitment occur in the fishery) and the development of new fisheries. Mississippi is one of only two states in the U.S. with a blue crab hatchery. The ability of USM/GCRL to produce â€œseedâ€ crabs has great potential for development of a bait crab fishery and expansion of the soft crab fishery. Pond culture of blue crabs would greatly reduce pressure on natural populations and would allow for fishery development independent of wild stocks. Interest in new fishery opportunities for Mississippi fishermen and inland pond aquaculture ventures led to the formation of the Mississippi Blue Crab Aquaculture Consortium. The Consortium is focused on establishing blue crab aquaculture in Mississippi, specifically the culture of small crabs for soft crabs and bait to create new domestic value-added products based on hatchery production technology.The proposed work addresses several RESTORE program areas including: 1) workforce development through training and participation in new fisheries, 2) research and technology transfer and development through partnership with the Mississippi Blue Crab Aquaculture Consortium members (USM/GCRL, Mississippi Department of Marine Resources; USDAâ€™s Mississippi Natural Resources Conservation Service; Alcorn State University), 3) aquaculture through production of a high-valued product for human consumption and a cultured bait for recreational fishing, 4) fishery economics through new fishery development, and 5) resource management through conservation of wild stocks.Re-location and expansion of the current hatchery will provide additional technical jobs as well as employment opportunities for fishermen and entrepreneurs interested in new fisheries. Inland farmers with ponds will be afforded the opportunity to culture new species. Workforce development and training will occur through outreach activities and technology transfer that will focus on pond culture techniques and marketing.	Jackson	Yes	No	Yes	30	Yes	Yes	Yes	No	No		$ 13,000,000.00	$ -	
	Workforce Development	5419	10/1/2015	Gulf Coast Economic Development Loan Fund	Founded in 2006, Renaissance, a 501(c)(3) non-profit Community Development Financial Institution Fund (CDFI), was established by a group of committed community leaders who had the vision and foresight to understand that the key to Mississippiâ€™s recovery from Hurricane Katrina (August 2005) would need to be a unified effort focused on community redevelopment. Renaissance thrived by offering programs designed to provide residents the opportunity to obtain the dream of homeownership through low-cost and low-rate lending, as well as structured financial counseling. Over time, Renaissance expanded the scope of its activities to provide both quality sustainable housing solutions and the creation of economic opportunities in Mississippiâ€™s low-to-moderate income communities. All of Renaissance programs include vital financial technical assistance and counseling in an effort to support clients throughout the process to success in wealth building and breaking out of the poverty cycles. Renaissance seeks to move residents out of poverty through its wealth-building opportunities of homeownership and small business development and/or expansion that creates and/or retains job opportunities for low income individuals. Renaissance has successfully deployed nearly $62.5M in Community Development Block Grant funds since 2009 and leveraged these funds with an additional $16M in private and public funding. These funds were not a â€œone timeâ€ spend, as the mortgage payments received by Renaissance are re-deployed into the community to continue to serve the purpose of providing affordable, sustainable and safe housing for Mississippiâ€™s workforce. Renaissance is a U.S. Small Business Administration (SBA) Community Advantage lender, the only SBA Intermediary Microenterprise lender located within the State of MS and is a member of the Federal Home Loan Bank of Dallas. Through our many partnerships and affiliations, Renaissance has access to capital that can be leveraged with all RESTORE Act money awarded to the organization to further the value and reach of the funds received. In addition, Renaissance is an Aeris-rated CDFI, a designation which signifies that the organization has been found to have sound policies, procedures, electronic systems and qualified staff in place to successfully administer its programs. The Gulf Coast Economic Development Fund would bring additional capital to an existing Renaissance and would enhance the perpetual loan fund that the organization has successfully established. The funds the State will receive through the RESTORE Act and the BP Oil Spill can be more than a one-time spend. If placed with the appropriate organization, such as Renaissance, to manage and deploy in the most effective way, the funds can become an economic driver for the State, continuing to stimulate economic growth for years to come.	Hancock, H	Yes	No	No		Yes	No	Yes	Yes	Yes		$ 12,000,000.00	#######	
	Workforce Development	5420	10/2/2015	Gulf Coast Broadband Project	The Mississippi Gulf Coast is in need of ultra-high-speed, fiber-optic, broadband infrastructure for Internet service that has sufficient scope, flexibility, availability and affordability, for all of its citizens, governments, and private businesses and industries to be able compete in regional, national and international markets for the creation and retention of new jobs, technologies, businesses, and industries and for the expansion and retention of equal opportunities for all citizens to enjoy a more prosperous, just, dignified and fulfilling life. The experience of many states and communities around the nation has been that large corporate providers of data transmission facilities do not have sufficient monetary incentive to bring affordable and ubiquitous, ultra-high-speed broadband Internet service to them unless there are significant public efforts and incentives to bring that technology to a proximity to all homes, businesses and public places that will make the final connectivity and service to all homes, businesses and public places by retail public and private service providers accessible and economically viable to the retail public and private service providers, affordable to the end users, and competitive in regional, national and world markets. The Cities of Biloxi and Gulfport established a unified effort to promote development of a minimum 1-Gig ultra-high speed Internet connectivity via a Fiber Optic Ring encompassing the entire Mississippi Gulf Coast. Subsequently, as of October 2016, eight other coastal cities and two of the three coastal counties have joined with Biloxi and Gulfport to form the Gulf Coast Broadband Initiative. With RESTORE funding assistance, the Fiber Ring will be implemented and administered by the GCBI, thereby providing to all area residents and businesses an affordable, ubiquitous and timely ultra-high-speed broadband Internet service. It will be delivered from the Fiber Ring to all end users by competitive licensing with private Internet Service Providers. The Gulf Coast Broadband Initiative has been created through an interlocal governmental cooperation agreement and is a separate legal and administrative organization with the authority to acquire any interest in real and personal property necessary to create and maintain the regional fiber optic ring in all of its parts. In order to eliminate the â€œdigital divideâ€ and create equal opportunity for all residents and businesses to enjoy reasonably affordable access and use of ultra-high-speed Internet service, the Initiative may contract with for profit and non-profit business	Harrison	Yes	Yes	Yes	85	Yes	Yes	Yes	Yes	Yes	agriculture	$ 15,000,000.00	$ -	
	Workforce Development	5423	10/23/2015	Mississipi Oysters Aquaculture Revolving Loan Program	Title: Mississippi Oyster Aquaculture Revolving Loan Program Eligibility of Activity: This activity complies with the following two eligible activities: â€¢ Mitigation of damage to fish, wildlife and natural resources â€¢ Workforce development and job creation Introduction: Oysters support a robust commercial fishery, improve water quality, and provide habitat for a number of economically and ecologically important fish species. As a result of the Deepwater Horizon oil spill and related anthropogenic activities (such as river releases) the estimated number of oysters that were lost (direct death and subsequent reproductive loss) at a minimum, was four billion oysters Gulf wide over three generations of oysters (seven years). Through an extensive planning effort in Mississippi in 2015, the Governorâ€™s Oyster Council created goals of increasing oyster harvests and creating new job and business opportunities. The establishment of a finance program could facilitate positive change for the oyster industry and the resource. Such finance programs have been instituted in other parts of the country where a revolving loan program is initiated that required little to no collateral, requires owner equity (i.e., investment of 10%), and allows loans to be used for the purchase of oyster shell and aquaculture specific equipment. These loan programs help initiate a boost to the industry in a particular sector (i.e., aquaculture) and provide opportunities for previously disadvantaged communities to engage, diversity income streams, and enhance economic development. Oyster aquaculture business startup expenses can run from $5,000 to more than $100,000 depending on the scope of the enterprise. Obtaining a loan from traditional commercial lenders for aquaculture business projects can be challenging for small enterprises and individuals considering the two to three-year growing period between oyster planting and growth to market size, as well as the lack of available business equity and collateral security. Mississippiâ€™s aquaculture loan program will require all principal payments return to a revolving fund to support future rounds of funding. The MDMR will partner with a credible lending institution to evaluate the credit worthiness of the prospective borrower(s), as well as the viability of the proposed project production and business plan (including the financial projections) that are required to be submitted with the application for assistance.	St Tamma	Yes	Yes	No		Yes	No	Yes	Yes	No		$ 1,000,000.00	$ -	

	Workforce Development	5452	12/8/2015	TechTown Pascagoula	TechTown is a â€œtechnology and entrepreneurial learning center offering year-round after-school programs and summer camps.â€ TechTown provides skill-building and certification curriculum for five focus areas including robotics, programming, film and arts. In contrast to the original TechTown Chattanooga, the proposed TechTown Pascagoula would be a 5,000 sq ft extension center offering focus areas customized for the jobs in our community. TechTown has a strong emphasis on securing scholarships for underprivileged youth. In addition to youth programs, TechTown also offers technology focused programs for adults and seniors. A TechTown Pascagoula program would combat the documented recruitment needs of local industries who are spending countless hours travelling to recruit necessary workforce. TechTown Pascagoula would spark the interest of local youth region-wide in STEAM (Science, Technology, Engineering, Arts, and Mathematics) related jobs of which Pascagoula is fortunate to be plentiful in. A facility of this magnitude would be the first in the State and have a multi-county and multi-state draw. Headquartered in Pascagoula, it would serve as a great partnership with Ingalls, Chevron, Singing River Health Systems, the Pascagoula-Gautier School District, the City of Pascagoula, the Mississippi Gulf Coast Community College (MGCCC), and MGCCCâ€™s recent collaboration with Mississippi State University among unforeseeable others. Attachments include presentations explaining TechTown and the capabilities.	Jackson	Yes	No	Yes	50	Yes	Yes	No	Yes	Yes		$ 2,000,000.00	$ -	
	Workforce Development	5453	12/11/2015	GoCoast Trust Fund	The proposed project will fund a perpetual GoCoast Trust Fund that will provide: (1) debt and equity financing of qualified private and public projects that will repay loans with interest and yield a return on equity investments; and (2) grants to public agencies for urgent public projects that do not generate revenue directly, especially eco-restoration projects. The Trust Fund will provide a long-term, economically-sound framework to stimulate regional economic recovery and growth that serves long-term public interests, and it will have the flexibility to adjust to market-driven changes in the regional, national and world economies. The GoCoast Trust Fund will be governed by a three-member Board of Trustees, composed of one resident from each of Hancock, Harrison and Jackson counties. The Governor shall appoint the trustees, subject to the approval of the Mississippi Senate and House of Representatives, for four-year terms, coterminous with the Governor. All actions of the Board of Trustees must be by unanimous vote of the Trustees. Operating expenses of the Trust may be funded from Trust Fund income and any public or private grants obtained by the Trust. On or before September 1st of each year, the Trustees shall submit to the Governor, the Legislature, and MDEQ (1) a â€œPlan of Investmentsâ€ for the next state fiscal year itemizing all proposed investments and projects for the next fiscal year, (2) financial statements of the Trust for the previous year, and (3) financial statements projected for the next five years. Prior to submitting each Plan of Investments, the Board of Trustees must submit the Plan to all state Senators and state Representatives representing any part of the three Coast counties. If a majority of Senators and Representatives submit an objection (in writing) to any specific project in the Plan, then that project shall be deleted from the list of projects that may be funded by the Trust in that fiscal year. The Trust will operate in the nature of a public investment bank to fund projects that address economic development; infrastructure; eco-restoration; research and education; seafood; tourism; or workforce development. Priority will be given to projects that stimulate and accelerate long-term, regional economic recovery and growth; job production; tax-base expansion; and quality of life for Mississippi Gulf Coast residents. Selection must be based on projects that, â€œbut forâ€ GoCoast Trust assistance, otherwise would likely not go forward within a strategic timeline and scope of development according to the long-term strategic plan adopted by the Board of Trustees. The operating office of the Trust shall be located within the three Coast	Hancock, H	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		############	$ -	
	Workforce Development	5458	12/23/2015	City Hall	Develop a site and construct a new City Hall to consolidate City operations. Pascagoula is one of the only cities on the coast that has not built a new or renovated facility on the coast. Operations are scattered among several locations, and buildings are deteriorated, costing considerable funds in annual maintenance and inefficient operation. In addition, residents must visit several locations to complete business with the City, making it not user-friendly. A new facility would consolidate services, making it more efficient for staff and citizens. The project would include site selection, development, design and construction.	Jackson	Yes	No	Yes	90	Yes	No	No	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5459	12/23/2015	Welcome Center / Tourism Center	Develop a site and construct a welcome/tourism center for the City of Pascagoula. The City has much to offer, and several large employers bringing visitors to the area. Often, these visitors miss the jewels of Pascagoula and Jackson County in favor of larger facilities in other nearby cities. A welcome / tourism center would provide meeting space, information about local attractions and facilities, and would complement other similar venues on the Coast.	Jackson	Yes	No	Yes	90	Yes	Yes	No	Yes	Yes		$ 5,000,000.00	$ -	
	Workforce Development	5464	1/25/2016	Highway Connectivity Project for City of Moss Point	A project to provide ease of transportation, accessibility and safety along the Interstate 10, Highway 63 and Highway 613 corridors from Old Saracennia Road north of I-10 to McInnis Avenue and Grierson Street south of I-10. 1. Interchange improvements and extension of service roads along with service road improvements along the I-10 and Hwy. 63 and 613 corridors. 2. Transform the Pascagoula Street/River Road/Griffin Street/Dantzler Street corridor into a major improved connector between Hwy-90 and Hwy-613, with widening, turning lanes, improved drainage, resurfacing, lighting, etc. 3. Widening and improvements along Grierson & McInnis Ave. from Hwy-63 to Main St. (Once Hwy. 90) to create greater access and increased flow to downtown from the east. Also include a stop light and cross walk at McInnis & Main and straightening and widening of McInnis in front of City Hall with added parallel parking. 4. Turning lanes and a traffic light at Hwy-613 and Dutch Bayou Road to create a new main entrance and exit at the Pelican Landing Conference Center, at the intersection. 5. Extend Audubon Way eastward across Main Street to Morris, creating a new intersection and creating commercial development opportunities.	Jackson	Yes	Yes	Yes		Yes	Yes	No	Yes	Yes		$ -	$ -	
	Workforce Development	5480	4/29/2016	Oyster Restoration through Aquaculture - Aqua Green	In Mississippi and throughout the Gulf of Mexico, the oyster fishery serves as an integral part of the economy and heritage of coastal communities. Events over the past decade such as Hurricane Katrina and numerous anthropogenic events (e.g., spillway openings, oil spill, etc.) have, however, impacted those resources in Mississippi and caused significant reductions in oyster landings and the amount of viable oyster reef habitat present. Identified as a priority by the Governorâ€™s Oyster Council (Council), USM proposes to continue its research and development in the production of eastern oyster larvae in an artificial seawater, recirculating aquaculture system to incrementally scale up larval production to provide a consistent supply of healthy oyster larvae for purposes of restoration and economic development. This supply of larvae will directly support: (a) restoration of the Stateâ€™s public reefs and expansion of private leases to increase annual oyster harvest numbers; (b) creation of living shorelines and reestablishment of natural non-harvest reefs for shoreline stabilization/marsh restoration, fishing habitat, and water quality enhancement; and (c) off-bottom culture (â€œoyster farmingâ€ for expansion of the Stateâ€™s commercial oyster fishery. To support these restoration objectives and achieve the Stateâ€™s goal of ten billion eyed oyster larvae annually, acquisition of the Aqua Green aquaculture facility in Perkinston, MS, and retrofitting/expansion of systems there is necessary to provide a platform for this large-scale larval production. Aqua Green was identified by the Councilâ€™s Hatchery Sub-Committee as the recommended hatchery to support Mississippiâ€™s oyster restoration because of its inland location out of harmâ€™s way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	77	Yes	Yes	Yes	Yes	Yes		$ 13,000,000.00	$ -	

	Workforce Development	5485	6/1/2016	Restore the Coastal Tree Canopy Strategies & Storm Preparedness and Mitigation	Restore the Tree Canopy will work with every city and county in the three coastal counties to identify perpetual public green spaces and enhance those spaces with trees varieties that are sustainable. This project can also work with previously approved RESTORE project to ensure that urban forestry is included in site development. The sites that we work with will be identified by either they city or approved restore project locations such as the conservation green ways or other projects approved. This project will help make-up for or mitigate the natural resources of trees that support habitats of all kinds including native birds, reptiles, and other species. Plus matched and enhance economic benefits. The project will include benefits for people and wildlife. The results will be a series of arborvitae creating a linear coastal green spaces for benefits such as eco-tourism recreation, clean air and water, storm water management, shade, increase property value and many other related benefits. Restore the Tree Canopy Strategies Habitat, Water Quality, Community Resilience Submitted by Donna Yowell, Executive Director of the Mississippi Urban Forest Council 601-672-0755 â€œRestore the Canopy Strategiesâ€ is a project that meets all five of the overarching framework goals of Restore the Gulf. This project will focus on collaborative and sustainable tree planting strategies and activities for local government, citizens, and NGOâ€™s. The project will include ways the community and individuals can actively participate, building knowledge, resilience, conservation activities, and ownership. Communities will learn the benefit of connectedness, to a healthy Gulf, based on actions within their own community. Stakeholder engagement and wide spread collaboration would be another focus. Trees have proven their natural capital to tourism and community economic enhancement, as well. Restore the Canopy is comprehensive in being a Mississippi coast wide project and will cover all three coastal counties with a recommendation to include the other 3 counties in the lower tier of Mississippi. The project will include all cities and counties	George,Ha	Yes	Yes	Yes	80	Yes	Yes	No	Yes	Yes		$ 450,000.00	$ -	
	Workforce Development	5494	7/6/2016	SRHS Infrastructure	Portions of the environmental infrastructure of our two hospitals are in excess of 40 years old and are failing. Other environmental utilities such as water utilization, electrical switch gear, and lighting for both acute care hospitals as well as our clinics are using technology that is costing hundreds of thousands of dollars a year more than their modern, energy and resource efficient counterparts. SRHS is proposing to replace failing components such as the SRH cooling tower and electrical switch gear, as well as the inefficient lighting, components of the OSH chiller, OSH boiler plant, and several air handler units at OSH, with modern counterparts that will save SRHS approximately $400,000 a year in operating expense. The cost of the project is estimated at $7,800,000.00, with an ROI of less than 20 years and a projected life in excess of 30, producing a net return on investment in excess of the cost of the project. SRHS is seeking capital funds for this project.	Jackson	Yes	Yes	Yes	100	Yes	Yes	No	No	Yes	healthcare	$ 7,800,000.00	$ -	
	Workforce Development	5507	8/16/2016	Mississippi Gulf Coast Region Utility Board Restore Plan	In the attached plan you will find recommended turnkey projects for five South Mississippi counties: Hancock, Harrison, Jackson, Pearl River and Stone. These are projects that can have significant environmental impacts on the region. Each individual project identified can be accomplished within a budgetary range of $500,000 to $3 million. Any approved project will enhance waterways and in many cases directly enhance the quality of oyster habitats throughout the region. The Mississippi Gulf Coast Region Utility Board adopted a strategy to work together as a region, understanding what is good for one, is good for all. The objective of the attached plan is not to seek approval of every submitted project, but rather approval of one project at a time if necessary. Over a 15 year period one can only imagine the accumulative effect, the significant environmental impact this strategy holds for South Mississippi.		Yes	Yes	Yes	50	Yes	No	Yes	No	Yes		$ 500,000.00	$ -	
	Workforce Development	5508	8/17/2016	Keegan Bayou Waste Water Treatment Plant Improvements for the Collection and Treatment of Seafood Industry Discharge	As part of the comprehensive public and private effort to improve water quality in the Back Bay of Biloxi before it reaches the Gulf of Mexico, the City of Biloxi is requesting RESTORE funding to reroute seafood processing byproduct discharge and treat it at the Keegan Bayou Waste Water Treatment Plant. This project will result in benefits to the public by preserving existing levels of business and supporting expansion of the local seafood industry operating on the Back Bay while significantly enhancing water quality through more efficient collection and treatment of industrial discharge. The proposed discharge collection and treatment improvements will provide a well-coordinated system to more expeditiously improve Back Bay water quality by exceeding National Pollutant Discharge Elimination System permit requirements for existing processors while allowing the cost-effective growth of Biloxiâ€™s seafood industry. This project complements the City of Biloxiâ€™s RESTORE Project #5399, Back Bay of Biloxi Festival Marketplace and Marinas, which requests funding to revitalize the seafood industry through public improvements that include expanded commercial dock space and supportive landside amenities. Project #5399 also includes incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program in partnership with the Mississippi Department of Marine Resources. The two projects will be coordinated to enhance traditional working waterfront activities on the Back Bay with a variety of land uses that showcase Biloxiâ€™s rich cultural history as the former â€œSeafood Capital of the Worldâ€ through shopping, dining, entertainment, and educational venues. These authentic, family-oriented activities will help grow the regional tourism industry in concert with activities to revitalize the seafood industry. The two RESTORE projects also will work together to meet federal and state water-related public health goals of the Clean Water Act to support present and future most beneficial uses for the propagation and growth of aquatic life as well as public water supply and public recreational uses. Implementation of both projects will have significant near-term as well as long-term positive impact upon Back Bay water quality, wetlands conservation and recreational safety and appeal. In collaboration with the Harrison County Utility Authority and the Mississippi Department of Environmental Quality, the City of Biloxi will design the discharge collection and treatment project to address projected levels of increased discharge from anticipated seafood industry expansion. Best management practices will be used throughout project implementation and operation.	Harrison	Yes	Yes	Yes	100	Yes	Yes	Yes	Yes	Yes		$ 25,000,000.00	$ -	
	Workforce Development	5518	10/17/2016	Elevating the profile of the Mississippi shrimp industry: a post-oil spill Fishery Improvement Project to advance and promote the sustainability of the Mississippi shrimp fishery.	Sustainability projects are the status quo in the seafood industry. The supply chain is being pressured to provide assurances that the product is sustainably harvested. Policies at companies such as Wal-Mart, Sysco, and Whole Foods are very specific and may block product that cannot demonstrate compliance. Despite being harvested under robust U.S. fishery management, most retailers require third-party verification through certifications or fishery improvement projects (FIPs). This proposal seeks to continue developing a FIP for the Mississippi (MS) shrimp fishery to elevate the fisheryâ€™s profile following a tarnished reputation from the Deepwater Horizon Oil Spill. The project has four tiers: 1.Assessment â€“ Sustainability pre-assessments to internationally accepted standards are the basis for FIPs. Some retailers specifically require a Marine Stewardship Council (MSC) assessment. This project will fund an MSC pre-assessment and the transition to a â€˜Comprehensive FIPâ€™ (see Conservation Alliance for Seafood Solutions). G.U.L.F. has recruited stakeholders for a FIP Committee to develop a time bound Work Plan verified by a third-party certifier. Over three years, G.U.L.F. will facilitate meetings of the Committee to track progress of the Plan. 2.Gear inspection â€“ Industry education about turtle excluder devices (TEDs) and bycatch reduction devices (BRDs) is an existing action of the FIP. A major concern in the Gulf of Mexico shrimp fisheries is interaction with endangered sea turtles. In federal waters, vessels are required to carry TEDs and BRDs, and non-compliance with regulations can cause a fishery closure if it passes a set threshold. The project will fund a Gear Inspector to conduct courtesy checks, ensuring TEDs and BRDs are properly installed, reducing the rate of sea turtle capture and the likelihood that fishermen carry non-compliant gear. 3.Industry Outreach: Inshore fleet â€“ Skimmer trawls are currently exempt from federal TED requirements if they adhere to tow time limits (50 CFR 223.206(d)(3)). NOAA is drafting an Environmental Impact Statement for potentially eliminating the TED exemption rule. G.U.L.F. will monitor this rule change, regularly update the MS shrimp industry, and educate industry members on how to submit comments through the rulemaking process. BRDs are not required in state waters. G.U.L.F. will continue to educate harvesters on benefits of BRDs and encourage voluntary use to further minimize bycatch. 4.Consumer Outreach â€“ To communicate the progress of the MS shrimp industry and its devotion to sustainability, G.U.L.F. will attend conferences and education events in MS and across the country, distribute materials encouraging consumers to purchase MS shrimp, and recruit restaurants to join the Restaurant Partnership Program, which encourages them to source domestic seafood and empowers wait staff as ambassadors for the industry.	Harrison,J	Yes	No	No		Yes	Yes	Yes	No	No		$ 391,073.00	$ -	

	Workforce Development	5526	12/10/2016	Magnolia Bayou Acquisition and preservation/research center	Magnolia bayou is an approximately 87 acre bayou and stream that feeds into the Bay Saint Louis bay. It sits just behind the Froogels and to the east of Dunbar street off of Highway 90. It is relatively undisturbed, with homes surrounding the boundaries of the bayou. Hancock County does not have much in the way of environmental education centers, and this would be the perfect location for it. There is a cleared tract of land that sits just off the service road that could serve as the parking lot and educational building location. The educational center will offer classes on the natural environment in Hancock county, tours of the bayou, educational outreach to local schools and groups, etc. This will help bring eco-tourism to Hancock County, start a grassroots educational program with the local youth to teach them how to be environmentally conscious from a young age, and to preserve a very important piece of Hancock County for years to come. This project is flexible, but the important part is protecting this land from any future developments and to utilize it to educate our youth. If there are any questions about this proposal please don"t hesitate to contact me! Thank you so much for indulging me in this proposal.	Hancock	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ -	$ -	Land Acquisition
	Workforce Development	5542	6/1/2017	Gautier Town Center (The Commons Park)	The City of Gautierâ€™s Town Center is located in the Central Business district, and plans are currently being developed for revitalizing the property of the old Singing River Mall into a major retail development for the City, Jackson County and the outlying areas. The proposed development being considered would include an open air mall, box stores and national tenants to attract interstate commerce. Jackson County does not contain a mall; however, there was one within the City of Gautier prior to the BP oil spill. It has since been torn down and suffered greatly as a result of the oil spill. The Gautier Town Center Project is located in Gautierâ€™s central business district. The Town Center is anchored by municipal buildings, commercial strip centers, MGCCC, and the mall project. Due to Gautier being situated along Highway 90 and being a â€œyoungâ€ city, it has no downtown area. Furthermore, Gautier is home to a Waste Pro home office, and a transfer station is proposed along Beasley Road, which is a dead end road that currently provides the only ingress/egress for a landfill, Waste Pro, municipal buildings, residential neighborhoods and heavy commercial uses. Therefore, the Town Center Project includes a network of roadways to facilitate the new town center commercial development and provide a connector from Gautier-Vancleave Road to Beasley Road. The Gautier Town Center Project incorporates 0.5 miles of roadway and 1 mile of multi-use pathway to link together retail, residential and recreational areas. It will also provide the transportation infrastructure necessary to accommodate the industrial type development nearby. The City has approximately 33 acres of property immediately north of the Town Center. The City has leveraged funds from both Tidelands and the Coastal Impact Assistance Program to acquire the property necessary for the Commons Park and to provide initial transportation infrastructure, lighting, sidewalks and streetscape improvements for the planned project. The City is proposing to develop a large recreational area and public park in conjunction with the Commons Development. A great portion of the property consists of wetlands. Throughout these areas, nature trails will be constructed to permit public access throughout this pristine ecological area. Small pavilions and tree houses will be placed along these trails to provide resting areas and opportunities to view the wildlife. Educational plaques depicting the wildlife and various species of plant life will be strategically placed throughout the nature trails explaining the wildlife habitat and ecological area. The center portion of the park will consist of a Great Lawn and festival grounds that will be a focal point for large crowd gatherings. The City of Gautier has an annual Mullet and Music Festival, which is held in conjunction with Cruisinâ€™ the Coast.	Jackson	Yes	Yes	Yes	80	Yes	Yes	No	Yes	Yes		$ 15,000,000.00	$ -	
	Workforce Development	5551	5/3/2017	Pollinator Health for Food, Wildlife and People- Public and Private Lands Environmental Education	Pollinator Health in Urban and Rural Communities Pollinator health is about our social and economic impacts and how all citizens can play a role in its success. Many times research on environmental projects do not have the opportunity to be applied on the ground in a variety of venues with nontraditional audiences. So, if research does impact citizens of all walks, it can result in a greater success rate for the mission and when data and knowledge is disseminated in a unique way it supports fulfilling its true potential or establish greater span of those impacted by the benefits. This project puts research, education, BMPs, technology and education in the hands of local citizens and community leaders that can make a difference on their properties, their community public lands and specialty crop farmers. Most local citizens do not have a clue how pollinator health impacts the quality and production of their food. The MUFC network provides a very hands-on opportunity to determine if citizens in these audiences can gain a better understanding of the role they play in pollinator health, the practices they can implement and why itâ€™s important. MUFC has many years of using research data and applying it to our cities and towns and the citizens living in and near these communities. The ultimate challenge of any research is applying that research on the ground, providing sound technology transfer, demonstrating best management practices and supporting the mission through creative partnership and collaborations. We will work through our municipal partners to conduct the workshops and implement the pollinator sites. Currently, MUFC has 97 communities in our Bloom Town Mississippi program with every community on the coast included. All of these are willing to host a pollinator health sites. Other local partners will include local community leaders, civic groups and private producers and land owners to install 12 demonstration sites and provide a series of outreach and education venues. Through this project we will partner with the groups we currently in our network and even new collaborators to include: workshops, hands on implementation of planting, social networking, local press, newsletters, web site, and large data base contacts. Contacts in the project include industry partners, mayors, city leaders, civic groups, chambers, parks and recreation professional, arborist, forester, landscape architects and citizens. Proposed metrics include multiple sources of information as outline in detail in the pre-proposal. Any data, surveys, charts, photo journal or other information generated as a result of this project will be public information and available for FAR or other research to use as needed.	George,Ha	Yes	Yes	Yes		Yes	Yes	No	No	Yes		$ 110,000.00	#######	
	Workforce Development	5560	5/16/2017	Pascagoula River Scenic Trail	Water trails are marked routes on navigable waterways such as rivers, typically for people using small non-motorized boats, such as kayaks and canoes. Originally created by environmentalists and conversationalists to encourage environmental awareness, they have evolved to be recreational routes on waterways with a network of access points. The Pascagoula River is the largest by volume unimpeded river in the contiguous 48 states. This project will develop ecotourism opportunities by establishing and developing a scenic water trail along the Pascagoula River. This scenic water trail will bring sustainable rural development to communities along the river in Jackson County. As the Stateâ€™s first water trail, it will serve to strengthen and extend recreational opportunities for residents and visitors. Trailheads will be constructed in four strategic locations along the river. Each trailhead will provide amenities such as public boat and kayak launch, pavilions, parking for visitors, and a kiosk with a map of the area. Although new to the State of MS, water trails have been implemented in other states and studies have been conducted to measure their economic impacts. While dissimilar in their measurements and time frames for data collection, each report shows that water trails can increase paddle sports tourism and bring new money into local economies. The studies also explored social benefits to a community and found that water trail communities experienced lower poverty rates and higher education and health levels than communities that do not provide recreational activities. Increased tourism around water trails will bring additional tourism dollars to the community. The Pascagoula Water Trail will create tourism travel to Mississippi by being the first Water Trail in the state, strengthen Jackson Countyâ€™s tourism economy through travel on nearby waterways, grow recreational opportunities with promotion of the Pascagoula River and highlight the historic significance of the waterway. The proposed locations for the trailheads are as follows: â€¢ Northern Trailhead â€“ Cedar Creek area â€¢ Roy Cumbest Trailhead â€“ Wade Vancleave Road â€¢ Hickory Hills Trailhead â€“ Near Hickory Hills Golf Course â€¢ South Trailhead â€“ Located near Gautier at U.S. Highway 90	Jackson	Yes	No	Yes	70	Yes	Yes	No	Yes	Yes		$ 3,000,000.00	$ -	

	Workforce Development	5750	10/16/2017	MDMR Remote Setting Facility	The oyster industry is an integral part of the Mississippi Gulf Coast â€“ its economy, its history and its culture. The oyster industry has suffered greatly because of several natural and man-made disasters since 2005, including Hurricane Katrina, the BP Oil Spill and three separate openings of the Bonnet Carre Spillway (2008, 2011 and 2016). In 2004, oyster fishermen in Mississippi harvested nearly 500,000 sacks of oysters. In 2012, there were no sacks harvested, and in 2016, about 40,000 sacks were harvested. Gov. Phil Bryant created the Governorâ€™s Oyster Council on Restoration and Resiliency in 2015 to address the problems this industry faces and to come up with solutions. One of those solutions is a remote setting facility. The Mississippi Department of Marine Resources (MDMR) is proposing to construct, operate, and maintain a large-scale remote setting facility at the Port of Gulfport. This facility would assist in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast. The proposed funding would allow for the planning, construction, operations, and monitoring activities that will be conducted to evaluate and document restoration effectiveness. If awarded, the MDMR has the resources, procedures and personnel to implement,MDM manage and operate a large-scale remote set operation to help increase the production of the natural reefs. The proposed facility would allow MDMR to increase the amount of spat (oyster larvae after it attaches on cultch material) introduced into the MS Sound and monitor the health and growth of those oysters. Remote setting is a method of producing oysters that differs from natural oyster production. Remote setting is the production of oyster spat by setting hatchery-reared larvae onto cultch (hard material for oyster larvae to attach usually shell, crushed concrete or limestone) at a remote location from the hatchery; spat are then planted on-bottom or off-bottom. Remote setting has been successfully implemented for the production of oysters along the Pacific coast and the Chesapeake Bay areas of the United States. Remote setting was developed in the Pacific in response to low natural oyster production as a result of over harvesting, pollution, siltation, disease and predation (Jones and Jones 1983, Henderson 1983). Initially, the Pacific coast oyster industry depended on imported seed, which became an unreliable source; however, with the development of hatcheries along the Pacific coast, remote setting continued to develop and thrived (Henderson 1983). In the Chesapeake Bay Area, remote setting developed in an effort to increase oyster production and to utilize disease-resistant larvae produced by hatcheries (Congrove et al. 2009). In Mississippi, the oyster industry relies primarily on planting cultch and naturally produced oyster larvae (wild larvae) to set on the material to produce market oysters. According to the â€œStrategic Framework for Oyster Restoration Activities,â€Ÿ oyster reefs provide a broad variety of ecosystem	Harrison	Yes	Yes	No		Yes	Yes	Yes	No	No		$ 9,360,000.00	$ -	
	Workforce Development	5766	2/25/2018	Reef Fish Community Permit/ Quota Bank	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Reef Fish Community Permit/ Quota Bank. Mississippi is the most under served state in the commercial Gulf reef fish fishery. Mississippi has the least amount of Gulf reef fish permit holders and individual fishing quota shareholders. This project would help to increase commercial access to reef fish species such as red snapper; a variety of groupers; a variety of tilefish; and various other fish species that require a federal Gulf reef fish permit to harvest commercially. This program would also help to reduce dead discards in the reef fish fishery by providing the needed quota to harvest fish that would otherwise have to be discarded at sea. This project would greatly benefit Mississippiâ€™s coastal economy by increasing access and landings for several species of reef fish. Mississippi's commercial fishermen, seafood dealers, seafood markets, and restaurants would all benefit from this project. Similar programs have been implemented across the Nation to provide community protections for limited access commercial fisheries. Visit www.catchinvest.com to learn more about permit and quota banks work. The need to diversify the income of seafood industry members is greatly needed due to the severe decline in revenues generated from the local oyster and shrimp industry following the BP oil spill.	Hancock,S	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 1,000,000.00	#######	
	Workforce Development	5767	2/25/2018	Seafood Traceability and Tagging Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Seafood Traceability and Tagging Program. This program would provide an electronic platform (i.e.; smart phone, tablet, and computer) and physical tags for commercial fishermen to improve domestic seafood traceability and help to eliminate fraud in the seafood industry. The need for this program arises from the prevalence of illegal and unreported seafood sales that undercurrent honest and legal seafood harvesters and businesses. This program would provide electronic reporting and tagging capabilities for commercially harvested marine species such as speckled trout, red fish, flounder, shrimp, blue crabs, and oysters. Similar programs have been implemented in federal fisheries with great success. In addition to eliminating fraud in the local seafood marketplace; this program would help promote domestically caught seafood and provide a story to the who, how, and when the seafood was caught. This program would also help to increase the value of Mississippiâ€™s commercially harvested seafood. Funds would be used to create a smart phone reporting application and purchase physical tags. Funds would also be required to employ managers of the program and conduct outreach to fishermen. An incentive base program is suggested to encourage participation in the program.	Hancock,J	Yes	No	No		Yes	Yes	Yes	Yes	Yes		$ 1,000,000.00	#######	
	Workforce Development	5768	2/25/2018	Off-Bottom Oyster Aquaculture Advancement & Investment Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Off-Bottom Oyster Aquaculture Advancement & Investment Program. Off-bottom oyster aquaculture has been proven successful in surrounding states and is currently pending permit approval in Mississippi territorial waters. This program would help establish a cooperative for potential off-bottom oyster farmers and investment capital to help jump start the off-bottom oyster aquaculture industry in Mississippi. The program would also help to increase Mississippi overall oyster production and provide stimulus to Mississippiâ€™s coastal economy. Currently, obtaining sufficient investment capital is a barrier to entry in the off-bottom oyster aquaculture industry. Preliminary estimates place the cost of entry into the industry at about $50,000 per acre. The program proposed would give traditional oyster harvesters and oyster industry members priority to access funds that could be used to establish private off-bottom oyster farms.	Hancock,J	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5771	2/25/2018	Shrimp Industry Task Force (Advisory Panel)	The Mississippi Commercial Fisheries United, Inc. proposes funding for the establishment of a Mississippi Shrimp Industry Task Force. The purpose of the task force (advisory panel) is to engage stakeholders throughout the shrimp industry to bring forth ideas and recommendations to implement sustainability projects and management measures. Mississippi currently does not have a shrimp industry task force. The task force would not have any regulatory power and would only be able to provide recommendations to the proper state and/ or federal governing bodies. This program request funds to conduct meetings, outreach, and procure certain equipment necessary to fulfill the objectives of the task force. Funds would be used to secure meeting venues; appoint and compensate task force members for time contributions; purchase technological equipment to record and broadcast meetings; and conduct outreach to the shrimp industry and local community.	Hancock,J	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		$ 250,000.00	$ -	

	Workforce Development	5777	4/10/2018	Sustain American shrimp processing industry with strategic investments	Overview of the Mississippi processing industry: The U.S. Shrimp processing industry is located in the five Gulf States region. While processors are shrinking in number, Mississippiâ€™s six processors have increased their share of the domestic shrimp processing market, processing approximately 30 million pounds of shrimp each year compared to Mississippiâ€™s 6 million pound annual catch. Processors are the crucial first link in the supply chain that delivers fishermenâ€™s harvests to the U.S. market through retail distribution, food suppliers and restaurants. Shrimp processed in Mississippi have a $100 million value when exported from Mississippi into the supply chain, a significant value-added industry, with significant economic impact on the state of Mississippi. Mississippi processors provide 2,300 jobs to the state of Mississippi, directly and indirectly. Jobs directly attributed to processing hit a post-Katrina high in 2015, more than 1600 â€“ even in light of direct processing jobs in Gulf states shrinking from 14,000 to 11,000 in the same time period. And, while the number of Mississippi processing jobs has fluctuated since 2006 due to natural and man-made catastrophes, it has bucked the national trends, growing when the U.S. number of processing jobs was in decline. Mississippiâ€™s ability to grow this industryâ€™s output, and economic impact in a stagnant / shrinking national industry demonstrates that with strategic investment in innovation, growth has occurred and can continue in the future. For more than a decade, Americans have consumed more shrimp than any other type of seafood, and the amount of shrimp that Americans are consuming continues to rise. In fact, in 2017, Americans ate an average of 4.4 pounds of shrimp per person, compared to 4.1 pounds in 2009. And 4.1 pounds of shrimp per person is nearly twice the per-capita consumption in 1990. Wild shrimp harvesting and processing are heritage industries of the Mississippi Gulf Coast, inextricably tied to our past, but that can be preserved and sustained for the future with the proper strategic investments. Mississippiâ€™s six processors have demonstrated resilience and innovation in the face of challenges. To capitalize on this opportunity, the industry and individual businesses within it must achieve the premium product positioning of wild caught domestic shrimp in the mind of consumers. And through sustained and strategic marketing efforts, reap the economic benefits of a higher price through every level of the supply chain, including fisherman. The challenges:	Harrison,Ji	Yes	No	Yes		Yes	No	Yes	Yes	No		$ 2,400,000.00	#######		
	Workforce Development	5864	12/14/2018	Pearl River County Open Broadband Fiber Internet	Objectives - Pearl River County Open Broadband Fiber Internet is an exploration of the economics and methods of providing open access high-speed broadband fiberoptic internet access to all of the county. Open access provides the fiberoptic infrastructure while providing equal access to internet service providers to service their customers. Fiberoptic infrastructure installations are essentially infinitely wide thus only the electronics limit the speeds provided to the customers. There is little to no competition for affordable high-speed internet in the county if it is available at all. What is available is either low speed or unaffordable for the majority of the residents. Broadband is not an ordinary product. It is essential infrastructure â€“ the platform on which most commerce now depends. It has high start-up costs that take years to recover. When telecommunications prices are too expensive or speed too slow and unreliable, all businesses and residents suffer. Much like towns bypassed by canals, rails, or highways, future prospects are bleak for communities without adequate access to the Internet. Communities that do not invest in their own next-generation networks will likely not see any significant broadband investment in the near future. Benefits - Benefits include encouraging economic development, increasing access to education, and improving the quality of life. Many of the benefits are indirect, or spillover effects in economic terms. Lower prices for telecommunications services mean more money in household and business budgets, and new jobs and business expansions mean increased tax revenue for local governments. These benefits to the community result in no direct benefit to the network owner, which is why private companies like Spectrum and AT&T have less incentive to invest at this level. This projectâ€™s mission allows it to incorporate indirect benefits to the community when evaluating its return on investment. A private company evaluates its success in some respects based on the amount of money that flows from the host community to distant investors, a public network maximizes the money left in the community. Activities â€“ Grant funds will be used for forming a board of directors, consulting with the various advocacy organizations, obtaining legal advice, attending trade shows to evaluate vendors, providing accounting, and various ancillary expenses. Expected Outcomes â€“ The business plan will be the ultimate goal of this project. It will determine the budget, sources for funding, methods and routes for fiber installation, and organizational structure. The expectation is that the recent population	Pearl Rive	Yes	No	Yes		Yes	Yes	No	Yes	No	Since this	$ 500,000.00	$ -		
	Workforce Development	5870	2/11/2019	Gigabit Gulf Coast and High-Tech Workforce	Mississippi Gulf Coast Community College proposes the Gigabit Gulf Coast and High-Tech Workforce project which will include the deployment, physical installation and connection of a Gigabit Gulf Coast fiber infrastructure tailor-made to meet the Coastâ€™s unique needs and requirements. In addition, MGCCC proposes to construct a Center of Excellence for Advanced Technology and offer high-tech workforce training to include Cybersecurity, Coding, Artificial Intelligence, and Virtual Reality. Mississippi Gulf Coast Community College (MGCCC) can play a unique role in helping to unify the disparate entities on the coast to accomplish these tasks. The broadband infrastructure of Mississippi has largely been in the hands of giant businesses with agendas that may not align with the interests of businesses, governments, or citizens of the Gulf Coast. In 2019, the Mississippi Broadband Enabling Act was signed into law, which allows electric power cooperatives across the state to offer high-speed internet service to its customers. Once a core cyber ring is in place, this law would allow the electric power cooperatives to take high-speed Internet service to the rural areas through the Gulf Coast region. By quickly building a future-proof pure fiber network, a Gigabit Gulf Coast can control and transform its digital future. It would establish timely, redundant, universal and affordable ultra-high speed internet connectivity. Local governments, businesses, and citizens together will spark innovation and draw new investments, develop new approaches to familiar services such as transport, education, health, utilities, and entertainment, and jump-start new ways of doing business that can take full advantage of an increasingly virtualized global economy. A vibrant fiber infrastructure will introduce a new set of challenges for everyone in the Gulf Coast region. It would be myopic to create a Gigabit Gulf Coast without training the workforce alongside this advancement to encourage innovation and protect businesses, organizations, and citizens. Objective 1: The physical installation of the fiber and connection of the key sites. This activity will proceed in as little as one or two years with new deployment technology. Activities will include first connecting public sectors, educational entities, and commercial sites with the most urgent and intensive demand. The next step will connect businesses, data centers, innovation hubs, and industrial parks that rely on data for their commercial existence. Ultimately, the pure fiber network will function as a backbone for deployment to individual homes, providing residential access to ever-richer forms of digital services and entertainment. Service providers will begin offering services over the new network and bring new applications, features,	Harrison	Yes	No	Yes	15	Yes	Yes	No	No	No		$ 26,000,000.00	$ -		

	Workforce Development	5777	4/10/2018	Sustain American shrimp processing industry with strategic investments	The U.S. Shrimp processing industry is located in the five Gulf States region. While processors are shrinking in number, Mississippi's six processors have increased their share of the domestic shrimp processing market, processing approximately 30 million pounds of shrimp each year compared to Mississippi's 6 million pound annual catch, a crucial part of the Blue Economy, both economically and environmentally. Processors are the crucial first link in the supply chain that delivers fishermen's harvests to the U.S. market through retail distribution, food suppliers and restaurants. Shrimp processed in Mississippi have a $100 million value when exported from Mississippi into the supply chain, a significant value-added industry, with significant economic impact on the state of Mississippi. Mississippi processors provide 2,300 jobs to the state of Mississippi, directly and indirectly. Jobs directly attributed to processing hit a post-Katrina high in 2015, more than 1600 â€" even in light of direct processing jobs in Gulf states shrinking from 14,000 to 11,000 in the same time period. And, while the number of Mississippi processing jobs has fluctuated since 2006 due to natural and man-made catastrophes, it has bucked the national trends, growing when the U.S. number of processing jobs was in decline. Mississippi's ability to grow this industry's output, and economic impact in a stagnant / shrinking national industry demonstrates that with strategic investment in innovation, growth has occurred and can continue in the future. For more than a decade, Americans have consumed more shrimp than any other type of seafood, and the amount of shrimp that Americans are consuming continues to rise. In fact, in 2017, Americans ate an average of 4.4 pounds of shrimp per person, compared to 4.1 pounds in 2009. And 4.1 pounds of shrimp per person is nearly twice the per-capita consumption in 1990. Wild shrimp harvesting and processing are heritage industries of the Mississippi Gulf Coast, inextricably tied to our past, but that can be preserved and sustained for the future with the proper strategic investments. Mississippi's six processors have demonstrated resilience and innovation in the face of challenges. To capitalize on this opportunity, the industry and individual businesses within it must achieve the premium product positioning. Competition within the U.S. shrimp markets with foreign producers is expected to continue as aquaculture producers utilize more direct transportation routes and find ways to reduce production and transportation costs. The aquaculture industry also has the ability to grow products to meet expected consumer preferences and deliver those products to markets in a uniform	Harrison,Jackson	Yes	No	Yes		Yes	No	Yes	Yes	No		$ 8,400,000.00	########	
	Workforce Development	5876	3/4/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: - Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; - On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; - Delivery of medical supplies and support to areas that are inaccessible to first responders; - Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and - Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison,Washington,Orleans,Perry,Forrest,Pearl River,Jackson,St Tammany,Stone,Hancock,Mobile	Yes	Yes	Yes	72%	Yes	Yes	Yes	Yes	Yes		$ 3,250,000.00	$ -	
New	Workforce Development	5876	4/16/2019	Unmanned Aircraft Systems (UAS) for Disaster Relief and Response	Mississippi's first responders have a substantial need for real-time, prioritized and on-demand aerial imagery and other airborne capabilities to support natural disasters such as oil spills, hurricanes, floods and fires. Airborne imagery provides up-to-the-minute information to support critical decisions on the allocation of response personnel, equipment and capabilities to save lives in the immediate aftermath of a disaster situation. Unmanned Aircraft Systems (UAS) are capable of providing high-quality, prioritized and persistent aerial imagery for sustained periods. Today's UAS technologies can provide: • Up to 12 hours of uninterrupted, high-resolution imagery or communications relay capability in a single mission; • On-demand prioritization and re-allocation of capabilities at the direction of the on-scene commander; • Delivery of medical supplies and support to areas that are inaccessible to first responders; • Relief from aircrew limitations due to the ability to rotate crews over the duration of a single flight; and • Reduced operating costs per flight hour when compared to many manned aircraft. The routine and normalized employment of UAS to support disaster response and relief efforts provides an exponential increase in Mississippi's capability to restore services, limit damage to critical infrastructure, and to save lives.	George,Harrison,Washington,Orleans,Perry,Forrest,Pearl River,Jackson,St Tammany,Stone,Hancock,Mobile	Yes	No	Yes	72	Yes	Yes	Yes	Yes	Yes		$ 3,250,000.00	$ -	
New	Workforce Development	5879	4/17/2019	KHSA Assault Landing Strip	This 4000' X 60' concrete Assault Landing Strip (ALS) will be constructed adjacent to the Airport's runway and provides needed training to local and transient US Military forces. The ALS supports Keesler Air Force Base's 403rd Tactical Airlift Wing, 815th Tactical Airlift Squadron and 53rd Hurricane Hunters' training missions. This specific designed asset will support transient C-130 airwings and joint warfighting training & readiness training. This project supports Naval Special Warfare (Special Boat Team 22 (SBT22), Naval Small Craft Instruction & Technical Training School (NAVSCIATTS), and WARCOM) at NASA's John C. Stennis Space Center, the U.S. National Guard's Combat Readiness Training Center (CRTC) at Gulfport-Biloxi International Airport (GPT)and the State's Camp Shelby. This project will support, Mississippi State University's ASSURE Center for Unmanned Aerial Systems (UAS, Vertical Take-offs & Landing Platforms (Both CV-22 & helicopters) and horizontally launched spacecraft as the Hancock County Port & Harbor Commission seeks Mississippi's first and only Federal Aviation Administration (FAA) Space Port License.	Hancock	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 7,627,318.00	########	
New	Workforce Development	5880	4/17/2019	Gulf Coast Mitigation Credit Program	Wetlands mitigation costs have historically been identified as a hinderance to economic development throughout the Mississippi Gulf Coast Region. SMPDD seeks to secure a pool of readily-available wetlands mitigation credits from private sector mitigation bank inventory for use on qualified, Corps-permitted projects, leveraging volume purchasing power to deliver significantly discounted credits and facilitate economic development efforts. Using the requested funding to "buy down" the price of available credits will accelerate mitigation credit availability, and substantially decrease mitigation costs which have long served as barriers to potential projects.	Hancock,Jackson,Harrison,	Yes	No	No		Yes	No	No	No	No		$ 1,500,000.00	########	
New	Workforce Development	5881	4/17/2019	Harbor Expansion Parking Area	Along the beachfront, adjacent to the Gulfport harbor, across from the upcoming Aquarium attraction, and with access to downtown's food and beverage, gaming, and lodging, the area around Gulfport's Jones Park / Barksdale Pavilion has become the City's hub for tourism. With the expansion of recreational activities and tourism in this area, the City of Gulfport has an immediate need for additional parking. Complimenting an adjacent lot, the proposed expansion of parking along the eastern edge of Jones Park will promote workforce development by providing additional areas for workers to park, will provide visitors access to tourism, eco-tourism, and recreational activities, provide additional public access for residents and visitors to the beach and fishing opportunities, and provide access to the educational benefits associated with the new aquarium. Ultimately this parking area will ensure inadequate parking will not stifle Gulfport's booming economic development. This additional parking will complement the proposed expansion of the Gulfport Harbor. It is proposed at the southeast corner of 20th Avenue and U.S. Highway 90 and will be asphalt-paved and striped to match adjacent areas. Any end cap islands will be constructed with curb and gutter and landscaping commiserate with the area will be added.	Harrison	Yes	No	Yes	75	Yes	Yes	Yes	No	Yes		$ 2,000,000.00	$ -	

New	Workforce Development	5882	4/17/2019	On-Site Animal Holding and Facility Operations Building	Development of on-site facilities at Mississippi Aquarium to house ambassador animal collection that the aquarium uses for educational outreach both at the aquarium and at schools throughout the state. The facility will also enlarge our on-site animal holding and treatment capacity to care for more animals on site and provide space for maintenance shops to handle rebuilding of pumps and equipment to increase life expectancy. Small office space for the maintenance team and aquatic team will also be included. This space will provide opportunities to partner with Mississippi higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level. This building would go on the footprint of the Masonic Lodge Building.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 1,750,000.00	$ -		
New	Workforce Development	5885	5/2/2019	Development of	The ARC will build the body of knowledge around the growing One Health movement, a collaborative effort of multiple health science professionals â€" veterinary medicine, human medicine, environmental, wildlife and public health â€" to attain optimal health for people, animals, wildlife, plants and our environment. By exploring the connection between health and the environment, this interdisciplinary approach can help protect present and future generations. Over the last three decades, approximately 75% of new emerging infectious diseases have been zoonotic, meaning the diseases have been transmitted from animals to humans. Research that studies the link between human, animal and environmental health is critical to our future, yet much of the work in this area has been focused on terrestrial species. By exploring the connection between health and the environment, The ARC can help protect present and future generations. Given the centrality of water to human life, and the great diversity of species and habitats our ocean supports, there is an urgent need for research focused on aquatic ecosystems. Not only will this research lead to a greater understanding of the public health risks of contaminated seafood, beaches and water, but it could also lead to new treatments and medicines that are marine based. This space will provide opportunities to partner with Mississippi's higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level.	Harrison	Yes	No	Yes		Yes	Yes	No	No	Yes		$ 2,500,000.00	$ -		
New	Workforce Development	5896	10/7/2019	STORM SURGE BARRIERS FOR BAY ST. LOUIS & BILOXI BAY	I HAVE A NEW CONCEPT FOR THE DESIGN AND CONSTRUCTION OF HURRICANE STORM SURGE BARRIERS, BARRIERS THAT ARE SPECIFICALLY DESIGNED FOR OUR UNIQUE BAY MOUTHS. i HAVE THE APPROVAL OF THE CONCEPTS BY CLARK STANAGE, WHO IS THE LEAD WATER CONTROL ENGINEER FOR THE WEST COAST US ARMY CORPS OF ENGINEERS, AND HAS BEEN SO FOR THE PAST 30 YEARS. HIS HOME PHONE # IS (916) 487-5215. MY BARRIERS ARE A SERIES OF ISLANDS ACROSS THE BAY MOUTHS. SEPARATING THE ISLANDS ARE CONCRETE CULVERTS, WITH FLAT BOTTOMS FLUSH WITH THE BAY FLOORS. THEY HAVE VERTICAL SIDES, NO TOPS. HINGED TO THE SIDES OF THE CULVERTS ARE STORM SURGE BARRIER GATES, similar in concept to cattle gates across a road. THESE GATES ARE NEVER CLOSED, EXCEPT DURING A HURRICANE OR A HIGH-FLOODING TIDE. AS A STORM SURGE APPROACHES OUR BAYS, AND THE SS WATER LEVEL GETS 9" HIGHER THAN A HIGH TIDE, THE GATES START TO FLOAT, AND THE INCOMING WATER CLOSES THEM. TO A VEE, NOT A WALL. A VEE SIMILAR TO THE BOW OF A SHIP, WHICH WILL BREAK UP THE SMASHING WAVES. THE STORM SURGE HIGH WATER HOLDS THE GATES CLOSED, THEY ARE NOT LOCKED CLOSED. WHEN THE SS GOES DOWN, THE HIGHER WATER INSIDE THE BAYS BLOWS THE GATES BACK OPEN. OTHER DETAILS PROVIDE FOR SHIPPING LANES, AND RAILROAD BRIDGES. i AM CURRENTLY WORKING WITH GULF COAST PRESTRESS FOR THE CONCRETE CULVERTS, AND TALKING TO ENGINEERING COMPANIES FOR THEIR ASSISTANCE. FURTHER PLANS AND LOCATION DRAWINGS ARE AVAILABLE ON REQUEST.	HARRISON, JACKSON, HANCOCK	Yes	No	Yes		Yes	Yes	Yes	Yes	Yes	COMPLETE PROTECTION FROM STORM SURGE	$ 100.00	$ -		
New	Workforce Development	5897	1/24/2020	Walter Anderson Museum of Art Creative Complex	The Walter Anderson Museum of Art requests $1,554,000 for Phases 2-4 of the Creative Complex, a campus expansion for coastal discovery and innovation, public access, and quality of life empowered by immersion in the natural world. The Creative Complex, a combined 15,000 square feet of interior and exterior spaces and public gardens, will be a center of education and recreation where visitors make connections to 21st century landscapes and applications, including those in science and technology, aquaculture and foodways, tourism, environmental stewardship, and restoration. The purpose of the project is to cultivate lifelong curiosity and connection to place through the convergences of culture, economy, education, and the environment. As American author Wendell Berry writes, â€œNeither nature nor people alone can produce human sustenance, but only the two together, culturally wedded.â€ Art, as a force for meaning-making and cultural resonance, is critical to the story of the Gulf Coast's resiliency. Walter Anderson's art contributes to the region's public education systems, tourism and community development, and conservation efforts. His studies of flora, fauna, and landscapes â€" and his history of exploring the barrier island wilderness â€" provide points of ignition for recreational and research-based programs that connect communities to their estuarine landscapes, as well as to the urgent need to study and protect them. WAMA's partners in science and restoration, including The University of Southern Mississippi Marine Education Center and the Grand Bay National Estuarine Research Reserve, are looking to art to communicate about complex systems. â€œOur goal is conservation, but conservation is complicated,â€‰says Dr. Ayesha Gray of the Grand Bay NERR. â€œConnecting nature, art and science is part of the heritage of the Gulf Coast and that legacy is exemplified by Walter Anderson's work,â€‰says Kelly Lucas, Ph.D., Interim Associate Vice President for Research of Coastal Operations and Director of the Thad Cochran Marine Aquaculture Center at The University of Mississippi. â€œ[Walter] Anderson is THE artist of the Gulf of Mexico,â€‰writes Jack E. Davis in his Pulitzer Prize-winning environmental history, 'The Gulf: The Making of an American Sea.' Anderson's journeys to the federally-designated wilderness of Horn Island from the 1940s through 1960s exposed him to its biodiversity and its scientific and geographical importance. He depicted its	Jackson	Yes	No	Yes	70	Yes	Yes	No	Yes	Yes		$ 2,500,000.00	########		
New	Workforce Development	5900	4/30/2020	TYR Resolution	Transitional housing for veterans to assist in stabilizing their return to being a productive citizen. Purchase property to house up to 6 veterans coming out from programs within the Biloxi Gulf Coast Veterans Health Care System (VA hospital). Whether they are coming out of the PTSD, Alcohol or Drug rehabilitation they need a place for temporary housing until HUD/VASH can get them long term housing - rather than rushing them into a drug trafficking location or a similar non-healthy recovery location. Currently, several go back out to homelessness and return to being a problem to society. This facility would provide them 24 hour management, temporary shelter in a clean environment, provide food and counseling on site, as well as retail experience working on site; thereby, starting a working resume. A coffee shop would be built on this property to provide a job for these veterans transitioning without them having to worry about transportation or safety in walking to and from work as well as provide continued income for sustainability for this program. This stage is estimated to cost $1.5 Million and provide the state of Mississippi valuable productive tax paying citizens, provide the city a property that has sit vacant for 10 years to be used, property taxes paid and rid of rats and vermin - along with business growth, homelessness resolution, crime reduction and self sustaining citizens. (1 full time employee and 3 part time employees)	Harrison	Yes	No	Yes	35	Yes	No	No	Yes	No		$ 1,500,000.00	########	Land Acquisition

New	Workforce Development	5947	11/25/2020	PAWS (Pets and Wildlife) Exploratorium	HSSM is seeking funds to construct a new facility on their property, which will serve as an education and community event location. Set in a nature-inspired landscape, the PAWS Exploratorium will provide an aesthetically pleasing venue at the juncture of 28th Street and Highway 49 and we will also get with the Gulf Coast Restoration Initiative to create a nature trail in conjunction with the new facility. This new area will focus on education and conservancy of all animals while also focusing on the human component of humanity-which is already at the center core of HSSM's mission and ingrained culture related to animal welfare and humanity. This facility will provide an additional mission based attraction for families to visit while being complimentary to and not competitive with surrounding aquatic organizations. The facility will feature live engaging exhibits with animals such as turtles, snakes, opossums, raccoons, etc., enhanced interactive educational opportunities, children's activities, a small Re-Tail store, various nature trails for bird watching and a pollinator path. The Exploratorium will also be open and available to other animal welfare organizations, such as Wild at Heart Rescue and Audubon MS and can be a destination for several local summer camps such as the City of Gulfport Summer Camps and Lynn Meadows Vet Camp. The facility will utilize existing HSSM land and will enhance current programs while also serving as a centrally located site for partner organizations. This new facility will perpetually support HSSM's lifesaving efforts and strive to educate the importance of animal welfare, preservation, conservation and humanitarianism. We will seek guidance from top architect consulters that have worked on tourist engaging projects in order to create an engaging and interactive experience for all attendees. The requested funds would support design and construction plus year 1 operations and encourage ongoing fundraising. HSSM plans to sustain PAWS by funneling Club Paw summer camp registration fees back into the program and by requesting parent/teacher organizations to provide a small fee for students and charge additional adult fees for each tour/education session as well as special event rental fees. Because of PAWS HWY 49 location-a major tourist access road- and its proximity to the Aquarium, we plan to partner with the Aquarium and possibly the Institute for Marine Mammal Studies to offer joint tourism tickets. In addition, we will use our extensive individual & corporate donor network as we have an established fundraising platform for our mission based initiative. We will also share trained HSSM staff with the new facility and veterinarians are already in place and could partner with local community colleges such as MGCCC for workforce training and	Harrison	Yes	No	Yes	90	Yes	Yes	No	Yes	Yes		$ 1,123,500.00	########	
	Research and Education	22	10/19/2013	PVRV Resorts	Solar-Powered RV Resorts described in attachment. Build PV carports high enough to park motorhomes, trailers and even mobile homes in the shade. The idea is to make money from thesun and from renting recreation spaces in the shade. Same concept could be used for more permanent housing for senior citizens living in disaster resistant modular housing.	Hancock Harrison, Jackson	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 1.00	$ -	
	Research and Education	47	10/23/2013	Linear Park on Beach Boulevard	The concept is to engage leading landscape architecture firms to establish a master plan to transition the Mississippi Gulf Coast's 26-mile man-made beach into a flourishing linear park along the Gulf of Mexico. A linear park that will be a touted haven for tourist, significantly enhance the Gulf Coast environmentally and provide the state of Mississippi with a preeminent eco-tourism destination. Linear Park on Beach Boulevard perfectly complements the region's tourism landscape. Perhaps more importantly, the Mississippi Gulf Coast will see a transformation from a "budget beach" to a transcendent park nestled between scenic Beach Boulevard and the Gulf of Mexico - a truly unique and premier landing-place developed with the environment, tourism and storm preparedness in mind.	Harrison	Yes	No	No	Yes	Yes	Yes	No		Yes		$ 100,000.00	$ -	
	Research and Education	77	10/27/2013	Wildlife Rehabilitation Center	The proposed project has four major components: 1. Land acquisition 2. Construction 3. Management & Administration of WCRC main mission 4. Education Land acquisition will involve locating and purchasing 5 to 30 acres with a bias toward Western Jackson County or Eastern Harrison County and also for properties which have at least power, water and sewer service on site. Further preference will be towards parcels with standing homes and or barns to reduce construction expenses. Smaller parcels within this size range may be favored to reduce continuing expenses. A donated parcel of land in the interim would eliminate this component of the project and the proposal would continue with the remaining points. Construction involves the renovation of any existing structures or the building of a suitable clinic space, a learning annex, and a separate protected rehabilitation space for animals in recovery. Animal enclosures of various characteristics and size would be needed. The largest of these would be an eagle flight cage built to the size and material regulations set by US Fish and Wildlife. It would be the only one of its kind in the state and, contingent upon occupancy, be available to house eagles in need from all parts of Mississippi. The main mission of WCRC is to rescue, rehabilitate and release injured and orphaned wildlife while educating our community on wildlife and our environment. This portion of the award would cover operational and administrative expenses such as taxes, insurance, and other scheduled recurring costs. Fundraising efforts would continue and help support the more daily expenses such as animal food and veterinary care currently encountered. To further this mission, we propose a full-time paid director and a volunteer coordinator be funded for the term of this project. They would administer the grant and the execution of the project under direction of our Board of Directors and fulfill the time-intensive roles indicated by their titles. The proposed educational component of this project will increase the number of public education programs provided by WCRC and increase the level of training for our volunteers. This will be accomplished by enrolling volunteers in state, regional and	n/a	Yes	No	No	No	No	No	Yes		No		$ 1,368,000.00	$ -	
	Research and Education	95	10/31/2013	Point Clear Island restoration/preservation and coastal access project	The Point Clear Island project is a former DMR approved mitigation site for a casino project which was never built. As the owner of the island and adjacent mainland lot I have sought partners from the City of Gautier, Land Trust and Conservation Fund to acquire and implement the restoration and construct tne pile supported island walkways and Graveline Bayou overlook. Land acquisition and construction is estimated to be less than $490,000. It would be good to name the project the Jean Baptiste Boudreaux de Graveline Island walk in honor of one of the earliest coast settlers.	Jackson	Yes	No	No	Yes	No	Yes	Yes	62	No		$ 490,000.00	$ -	
	Research and Education	96	10/31/2013	Pass Christian - East Harbor Expansion Improvements/Enhancements	The City of Pass Christian is currently constructing a harbor that is funded via CDBG (economic development - must create 50 jobs in 3 years), CIAP grant and BP block grant. The 22+ acre harbor basin, dredged to 10 ft. depth, includes 164 recreational and commercial boat slips, 96 truck/trailer parking slips, 215 automobile parking slips, 4 tractor/trailer slips, 4 publicly accessed boat ramps, landscaping, water/sewer and electrical infrastructure and 2 public restroom facilities. An elevated access structure along the east breakwater perimeter allows public access for fishing and will serve as base of operations for commercial seafood operations. Additional items include signage denoting protected and endangered species and public information regarding invasive aquatic species and how to prevent spreading. The design includes approximately 240 recreational and commercial slips but approximately 75 slips were bid as alternates due to funding constraints. Additional items designed and bid as alternates are a splash pad/spray park, pier for commercial operations related to shrimp off-loading, additional public restrooms and improvements to existing harbor area serving commercial operations. Additional items to consider funding include public laundry facilities for transient boaters and handrails along southwest breakwater that will allow public access. The project is designed to meet clean marina program criteria. Construction completion at 10/31/13 is approximately 50%.	Harrison	Yes	Yes	No	Yes	Yes	No	Yes		Yes	commercia	$ 3,500,000.00	$ -	
	Research and Education	97	10/31/2013	Cedar Lake Acquisition	Approximately 14 waterfront acres with a potential interpretive center could be acquired. The property is located at Cedar Lake adjacent to the Tchoutacabouffa River. Approximately 2 acres are on Cedar Lake Island with the remainder on the mainland. The property connects with approximately 45 acres of preserved Land Trust property.	Harrison	Yes	No	No	Yes	No	Yes	Yes	20	No		$ 890,000.00	$ -	
	Research and Education	1146	10/7/2011	Biloxi River	(ORIGINAL ID#11393) Palmer Creek and Biloxi River are the west boundary of the parcel that is adjacent to the Desoto National Forest on its southeast and north boundary. Conservation of the parcel would preserve natural springs flowing into the Biloxi River that flows into Back Bay on the Mississippi Coast.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 750,000.00	$ -	

	Research and Education	1152	11/9/2011	BSL Municipal Harbor Improvements	(ORIGINAL ID#11459) This project consists of improvements to the BSL Harbor located at 100 Jody Compretta Drive, near Downtown. Proposed projects consist of: 1. The City proposes to construct Pier 5 inside the BSL Harbor. The project consists of permitting and coordination with regulatory agencies, design, bidding and construction of a new 10' wide timber pier with concrete piling associated water and electrical utilities and lighting. The BSL Harbor has proven to be an economic driver for Hancock County and BSL since it's opening in 2013 and boasts one of the highest occupancy rates of all harbors on the MS Coast. The proposed Pier 5 project will add approximately 18 65' wet slips and approximately 25 35'-40' wet slips. These slip sizes represent the size range in most demand, all current slips in this size range are leased to long term slip holders. 2. Planning and preparing a maintenance dredging plan for BSL Harbor dredging and for removal of approximately 60,000 CY of material from the BSL Harbor basin. The planning stage will consist of hydro graphic surveying of all canals and the harbor basin to determine the amount of material which needs to be dredged and utilized for marsh restoration. 3. Bay St. Louis proposes to extend the existing Day Pier which is located adjacent to the Rutherford Pier at the Municipal Harbor. The Day Pier is used daily to dock local transient vessels which frequent the nearby downtown establishments. The current pier is approximately 200 LF in length can not support the amount of vessels which frequent the area. The extension would add an additional 400 LF of docking space and enhance and support local and regional tourism efforts.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 4,300,000.00	$ -	
	Research and Education	1156	9/26/2011	Point Cadet Preliminary Planning	(ORIGINAL ID#11200) Point Cadet is the last green space on the Gulf Coast open to the public. Point Cadet was the Mississippi hub for BP, PLC's clean up operations following the oil spill. This project presents a unique opportunity to enhance the environmental quality of life along the Gulf of Mexico and improve the area for any future emergency response. Point Cadet has long had the support of the State of Mississippi and is eligible for funding from the Mississippi Public Trust Tidelands Fund. Completion of the project would merge Biloxi's fishing heritage, commercial and recreational marine access, and Gulf of Mexico education opportunities into one location open to the public. The improvement of Point Cadet would also enhance preparedness for any future Gulf catastrophe by expanding existing staging areas. While the project has the full support of the State of Mississippi, additional funding in the amount of $10,800,000 is needed to complete this project. The Tulane Regional Urban Design Center (TRUDC) and 16 Architecture students have been working with the City of Biloxi throughout the spring to create a new vision for Point Cadet, a public waterfront park in East Biloxi. The Point serves as a highly visible gateway to the city, and is the last waterfront green space open to the public. The TRUDC is responsible for accommodating the new Seafood Industry Museum along with a marina expansion, small retail locations, covered open spaces for festivals and farmer's markets, a children's park, open green space, and other public amenities. On March 30, TRUDC leaders and students presented their preliminary designs to the public. The meeting allowed students to both share their work and encourage members of the public to describe what they would like to see at the Point. The group has worked closely with Biloxi Mayor A.J. Holloway and other city officials, and will tailor their proposals to incorporate what they have learned from the public and the administration. A consolidated plan that draws from the students' individual work was created following the public meeting. The TRUDC has worked with H3 Architects to incorporate the Seafood Industry Museum design, created a working budget to aid the city in fundraising and allocation, and provided plans and renderings broken down into budgeted phases for clarity and ease of implementation.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ 10,800,000.00	$ -	
	Research and Education	1158	7/8/2013	Tchoutacabouffa Nature Area/Blueway & Greeway	(ORIGINAL ID#12019) 2) The Tchouticabouffa River Blueway/Greenway is an exciting project that addresses the unique riverine resources that start in the upper reaches of Harrison County and drains some 75 square miles of watershed that eventually enters Back Bay and then the open waters of the Ms Sound. The City has acquired CIAP and Tidelands funds to make limited investments in procuring sensitive lands for conservation purposes. The Tchoutacabouffa River watershed has been studied by the MDEQ as part of the Coastal Independent Streams Basin. At present, the City and the Land Trust for the Ms Coastal Plain have partnered to expend CIAP funds to purchase stream side properties in association with the proposed Riverside Park tract, just north of Lamey Bridge Road. Now is the time to acquire available properties along various parts of the river for conservation and public access purposes. BP funds of $3.5 M are requested to purchase property yet developed to further protect the water quality of this waterway leading to the fragile fisheries nursery downstream	Harrison	Yes	No	No	No	No	Yes	Yes	10	No		$ 3,500,000.00	########	
	Research and Education	1161	7/8/2013	Brodie Bayou Reclamation/D'Iberville Waste Water Treatment Facility Adaptive Reuse	(ORIGINAL ID#12022) The Brodie Bayou Reclamation/Public Access is a unique project that seeks to convert the old D'Iberville waste treatment plant ($4.5M) to support the collection and transmission of saltwater to the Ocean Expo project at the Interstate. Also, plans envision acquisition of adjoing shoreline and wetland areas to allow public access to Back Bay. Approximately 12 acres ($3.0M) is needed to join with 17 acres of city owned land. This adaptive re-use project provides new public access to a very special shoreline area known as Brodie Bayou. Wetlands reclamation and enhancement in this bayou will provide immediate benefits for the ecology and public access to these once off-limits shorelines. This would create a new bay front park on the west side of the I-110 where no such facilities currently exist. Adaptive reuse of the facility to support Ocean Expo is both creative and an efficient use of city property and facilities.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 7,500,000.00	$ -	
	Research and Education	1162	7/8/2013	French Market Conference Facility	(ORIGINAL ID#12021) The French Market Conference Facility is a major component of the city?s post Katrina recovery plan for the redevelopment of the downtown area. The availability of public land (14 acres) at the former D'Iberville middle school site would form the core assemblage along with other city owned property. This location now houses the Town Green/Historical Center and will soon be home to the first phase of the CTA Transit Center. This location is one block from the City's waterfront and together with the proposed commercial seafood harbor, D'Iberville hopes to complete the multi-faceted restoration of the downtown. Roads and utilities have been upgraded throughout this area to support major growth in the downtown to coincide with planned casinos south of Racetrack Road. The centerpiece of the French market is a meeting facility with attached hotel and decked parking to grow the conferencing portion of the tourism trade that compliments gaming and overall tourism development. An asset of this type will help diversify our economy and act as a catalyst for rebuilding this area. A 20,000 square foot meeting facility scaled to meet the city?s modest needs is expected to cost $12 million. The City would secure a private hotel developer/operator to co-manage the combined facility.	Harrison	Yes	No	No	Yes	No	No	Yes		Yes		$ -	$ -	
	Research and Education	1163	7/8/2013	Fountain Beach Public Access and Wetlands Restoration	(ORIGINAL ID#12020) The Fountain Beach Public Access and Wetlands Restoration is another waterfront restoration project that seeks to expand the available acreage for public access to the shoreline. The unique wetland areas and near shore waters associated with Fountain Beach would be restored and enhanced. The City has invested local and Tidelands funds over the last decade to make Fountain Beach a popular bay front park for the public use. New public fishing piers would be constructed in an already popular public facility. Approximately 4 acres is needed to expand the current footprint along the Bay. With improvements and amenities, the project is estimated to cost $4.0M.	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 4,000,000.00	########	
	Research and Education	1165	11/7/2011	Fountain Beach Environmental Enhancements & Public Access	(ORIGINAL ID#11433) This project seeks to undertake restoration and enhancement activities for on site tidal wetland areas, repair erosion of the shoreline, and improve public access through repairing and extending the existing fishing pier.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 300,000.00	########	
	Research and Education	1173	9/26/2011	Dantzler Street Bridge Elevation	(ORIGINAL ID#11209) The Pascagoula River Audubon Center is being relocated to downtown Moss Point. The Dantzler Street Bridge needs to be elevated three feet to accommodate this relocation and the tour boats and to compliment the waterfront walkway proposed for areas around Pelican Landing and Beardslee Lake and from McInnis Avenue to Elder Street. The bridge and bridge approaches will need to be raised as will existing city utility lines.	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 651,000.00	$ -	
	Research and Education	1178	8/19/2011	Environmental Impact Assessment at Gulf Island National Seashore for Bike Lanes	(ORIGINAL ID#860) This project consists of an Environmental Impact Assessment at the Gulf Island National Seashore for bike lanes ($60,000; for conducting a NEPA assessment to place safe bike routes along major arteries within Gulf Islands National Seashore - a National Park Service facility - to connect Highway 90 to the Mississippi Sound, Park Visitor Center, bayous, and picnic areas). Construction of lanes and elevated walkways through the forest is estimated at $1.5 million and would include interpretive plaques with a description of the wildlife and fauna found in the park.	Jackson	Yes	No	No	Yes	No	No	Yes		No		$ 1,560,000.00	$ -	

	Research and Education	1183	8/19/2011	Front Beach Sand Replenishment / Extension to create 'Living Shoreline'	(ORIGINAL ID#855) Front Beach Living Shoreline and Upstream Improvements to Increase Resilience. Employ a Living Shoreline approach to approach to reduce erosion on Front Beach while mitigating upstream flooding. Replace failing drainage outfalls into the MS Sound with strategy to mitigate the flow of water from upstream, while replacing traditional concrete pipe culverts at the Mississippi Sound with a strategy that combines traditional drainage with a "Living Shoreline" that distributes water flow through aquatic plantings and structures, trapping and accruing sediment to minimize erosion. The City received a MS/AL Sea Grant award that allowed them to develop a preliminary engineering and landscape design and cost estimate. The project relates to the Army Corps of Engineers Mississippi Coastal Improvement Program (MSCIP). This project is ready to develop bid specifications and construction is estimated at $4 million.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 4,000,000.00	#######	
	Research and Education	1190	11/9/2011	Point Park	(ORIGINAL ID#11450) This project consists of the design, engineering, and construction for the development of Point Park. This currently undeveloped site was used by BP during cleanup operations. This includes demolition of existing structures, deteriorated piers, and concrete areas and the development of drainage, flood control, and erosion prevention structures and water and sewer infrastructure. Improvements would be made to roads, walkways, boardwalks, and parking areas as well as existing piers, wharfs, boat ramps, and pavilions. New boardwalks, fishing and birding amenities, and a restroom would be added at the site. An amphitheater and playground would be constructed to improve entertainment and recreational resources. Included would be landscaping, benches, tables, BBQ units, and trash receptacles.	Jackson	Yes	No	No	Yes	No	No	Yes	90	Yes		$ 15,990,250.00	#######	
	Research and Education	1191	11/9/2011	Lowry Island Marina	(ORIGINAL ID#11449) This project would assist with the redevelopment of the Lowry Island Marina. An interpretive boardwalk would be constructed with appropriate width and length to accommodate various recreational uses and pedestrians and to allow for better access from various points of Lowry Island. Included would be landscaping, directional signs, benches, tables, BBQ units, trash receptacles, as well as lighting for the boardwalks, parking areas, and educational signs. An amphitheater for entertainment, functions, and public gatherings would be constructed as well as pavilions with restrooms and storage. Berthing areas for nature trouism boats and kayak launching facilities will be added. A wall would be placed along the river for fishing, picnics, and viewing. Harbor improvements would provide water, sewer, fuel, and power for boat slips, lighting of piers and walkways, and construction of a multi-level dry dock structure. The road to the northern tip of the island would be enhanced for better access to the existing businesses.	Jackson	Yes	No	No	Yes	No	No	Yes	90	Yes		$ 12,312,848.00	#######	
	Research and Education	1193	12/8/2012	B.B. Jennings Park Ecological and Wetlands Education Center & Blueway Connection	(ORIGINAL ID#11861) Pascagoula is pursuing a citywide revitalization strategy to reconnect neighborhoods to their waterfronts on bayous and wetlands, the Pascagoula River, and the Mississippi Sound. In its Parks Master Plan, the City identified B.B. Jennings Park in a historic, low-income neighborhood as an opportunity for residents to gain an understanding of the region's complex hydrology and ecology. The Mississippi Department of Marine Resources chose the park as a demonstration project for its Coastal Smart Growth Initiative and provided funding for conceptual redesign. Planned activities at B.B. Jennings Park include: 1. A citywide nature education center where visitors and local school children will be introduced to the region's plants, animals and ecosystem processes. 2. The stabilization and restoration of a natural streambed via marsh and wetland habitat plantings and erosion prevention measures. 3. New green infrastructure to include a nature trail, green parking and stormwater management best practices. These projects will demonstrate the use of these water quality strategies to the public and encourage wider use. 4. Connections from Pascagoula's Complete Streets bicycle and trail network to the Park's interpretive nature trails. 5. Property acquisition to expand habitat and visitor capacity. 6. Creation of a Pascagoula River Blueway connection from B.B. Jennings Park to the Pascagoula River. Environmental benefits include marsh and wetland restoration in the Pascagoula River watershed, which suffers from numerous water quality impairments. The bayou flowing through this park is part of a larger system that traverses marshland and drains from Krebs Lake into the Pascagoula River. The demonstration of best stormwater management practices and acquisition of adjoining undeveloped parcels will produce measurable water quality benefits onsite and in the region. Reducing stormwater pollution will improve water quality for fish and wildlife and support economic development through the area's growing eco-tourism industry. Increased amenities also serve Pascagoula's economic development goal of retaining professionals, who cite local quality of life as a key reason for relocation. Mississippi ranks highest in the nation in obesity, and community benefits to the project include expanded recreational opportunities for physical fitness through hiking, jogging and boating.	Jackson	Yes	No	No	Yes	No	Yes	Yes	70	Yes		$ 2,781,250.00	#######	
	Research and Education	1195	9/5/2012	North Jackson Marsh Restoration/Enhancement	(ORIGINAL ID#11791) Historically, this area has provided many critical functions to the marsh ecosystem and City of Waveland. As a transitional estuarine/freshwater wetland the area: 1) provides the marsh with fresh water; 2) collects, holds and treats much of the City?s storm water runoff; 3) provides a natural refuge for estuarine species; and 4) is the heart of natural corridors for plants, amphibians, reptiles and birds. Alteration and development has seriously derogated the area?s ability to provide these functions. A nonstructural restoration/enhancement of the area can play a key role in the City?s recently approved Hazard Mitigation Project. As proposed here a multifaceted approach will be used to restore/enhance the area by: 1) removing accumulated debris and sediment, 2) remove invasive plant species, 3) restore, expand and enhance the area?s various wetland habitats, and 4) incorporate minor stream bank enhancements to the area between the pond and northern limits of Jackson marsh. Enhancement/restoration activities will include selective (hack and squirt) herbicide applications to remove invasive species, grubbing, sediment and debri removal. Once grubbing and sediment/debris removal activities have been completed, native wetlands species will be planted and monitored within the site. A restrictive covenant/conservation easement will be placed on the property to prevent any adverse impacts to the property once restored. The City of Waveland has an existing contract with the Pickering Firm, Inc. which will allow them to provide the environmental, engineering and other professional services needed for the project. The area will function as a city recreational park area with an emphasis on nature.	Hancock	Yes	No	No	No	No	Yes	Yes		No		$ 380,000.00	$ -	
	Research and Education	1210	1/1/1900	Replacement for R/V Tom McIlwain	(ORIGINAL ID#191) Funds for the purchase of a replacement research vessel for the Gulf Coast Research Laboratory.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No	Yes		No		$ -	$ -	
	Research and Education	1212	10/24/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11412) GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental well being of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON); - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland- Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fis h varies among species. This necessitates the collaborative involvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -	

	Research and Education	1214	7/18/2011	Gulf of Mexico Community-based Restoration Partnership	(ORIGINAL ID#635) The Gulf of Mexico Community-based Restoration Partnership (GCRP) is a regional multi-year partnership that was established in 2001 between the NOAA Community-based Restoration Program (CRP), the EPA Gulf of Mexico Program Gulf Ecological Management Sites (GEMS) Program, and the Gulf of Mexico Foundation. The purpose of the partnership is to strengthen conservation efforts by supporting on-the-ground projects to restore coastal marine habitats, benefit living marine resources, and foster local stewardship of the sites. This successful collaboration will help to expand restoration of habitats that are critical to the sustainability ofnatural resources in the Gulf of Mexico, and to continue to expand public education and outreach efforts to broaden participation in restoration activities, further developing a conservation ethic at the community level. To date, the GCRP has funded 76 community-based restoration projects. These projects occurred in a number of habitat types. In total more than $3 million has been funded by the Gulf of Mexico Foundation towards these restoration projects, of which an additional $5.5 million has been leveraged in matching contributions from project partners. This match includes nearly 50,000 contributed volunteer hours. In total, more than 15,000 acres of coastal habitat have been restored as part of these partnership projects. A multi-agency steering committee works effectively to guide the partnership in soliciting and developing projects, reviewing and selecting projects for funding, ensuring required permits and assurances are acquired, and monitoring project progress and compliance. There is a broad diversity of groups involved in the partnership projects, including school children and other community volunteers, universities, nonprofit groups, business and industry, and coastal planning organizations, such as NEPs and NERRs. Collaboration between the partners, many of which have their own public outreach programs to link w ith the GCRP, will result in long-term stewardship of the restored resources and help generate a community conservation ethic. The GMF will lead further development of the GCRP in a manner that best addresses a regional approach to restore coastal marine habitats and benefit the natural resources of the Gulf of Mexico. Our goal is to take action towards reversing the downward trend in habitat loss and increase the attention on the growing need to preserve and protect America's Gulf Coast.	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,500,000.00	#######	
	Research and Education	1219	3/27/2012	GSMFC Cooperative Regional Monitoring Project	(ORIGINAL ID#11656) When the BP drilling rig Deepwater Horizon exploded approximately 50 miles southeast of the mouth of the Mississippi River on April 20, 2010, it caused significant damage to the waters of the Gulf of Mexico. In order to effectively assess the long-term effects of this event, there needs to be a coordinated regional approach in monitoring the status and health of the marine resources in the Gulf of Mexico. The Gulf States Marine Fisheries Commission (GSMFC) is uniquely poised to provide such an approach. Established by both state and federal statutes in July 1949, the GSMFC is an organization of the five states (Texas, Louisiana, Mississippi, Alabama, and Florida) whose coastal waters are the Gulf of Mexico. It has as its principal objective the conservation, development, and full utilization of the fishery resources of the Gulf of Mexico to provide food, employment, income, and recreation to the people of the United States. One of the most important functions of the GSMFC is to serve as a forum for the discussion of various challenges and programs of marine resources management, industry, research, etc. and to develop a coordinated approach among state and federal partners to address those issues for the betterment of the resource for all who are concerned. The GSMFC has a long history of successfully coordinating and administering cooperative, regional programs such as the Southeast Area Monitoring and Assessment Program (SEAMAP), Interjurisdictional Fisheries Program (IJF), Sportfish Restoration Program (SFRP), Fisheries Information Network (FIN), Economics Program (EP) and the Marketing, Traceability and Sustainability components of the Oil Disaster Recovery Program (ODRP). One of the reasons the GSMFC has been so successful is that it is a vertically-integrated organization that provides products and services that satisfy a common need to both its state and federal partners throughout the Gulf of Mexico. In addition, the GSMFC has sole-source authority, under the Magnuson Fishery Conservation and Management Act, Title IV, Sec 402(d), which will expedite the distribution of funds and quickly allow these important activities to commence. Outlined below are the various activities, by GSMFC program, that can be accomplished if the requested funding is provided. It is important to note that these activities will augment the existing long-term work (totaling $5,530,000) already being conducted and funded through the GSMFC. The total annual cost for all of the proposed GSMFC activities is $2,418,000. The duration of this proposed project is 10 years. With inflationary increases over a ten-year time period, the total cost of this project is $27,578,000. The attached PDF provides specific program details.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		No		$ 27,578,000.00	#######	
	Research and Education	1229	9/7/2011	Rebuild Veterans Avenue Pier	(ORIGINAL ID#1066) The Veterans Avenue Pier was damaged by Hurricane Katrina. Prior to Hurricane Katrina, this pier had been a major beach amenity. The pier will be re-constructed and will be approximately 700' long. The damage to the pier was mainly destruction of the superstructure. The support structure is basically in tact, but may need some repair/replacement. The superstructure of the pier will be timber and will be approximately 20' wide. The water bottom around the pier will be enhanced to attract more aquatic life through constructing an artificial reef, planting aquatic vegetation and other habitat enhancements.	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	1233	9/7/2011	Enhance Aquatic Habitat around Existing Piers	(ORIGINAL ID#1065) There are 7 piers located along the 26 mile stretch of sand beaches in Harrison County, MS. These piers provide recreational opportunities for the residents and tourists. They are also a location where people can enjoy the view of the MS Sound and the adjacent Barrier Islands. In order to attract aquatic life - crabs, fish, etc., it is proposed to plant sea grasses and provide artificial reefs around each pier. The piers are: Porter Avenue and Coliseum Park - Biloxi Ken Combs Pier, Uric Pier, Moses Pier, and West End Pier - Gulfport Jim Simpson Pier - Long Beach	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 1,750,000.00	$ -	
	Research and Education	1246	9/26/2011	Sediment and Tar Ball Transport Study	(ORIGINAL ID#11180) The Jackson County Board of Supervisors (JCBOS) is interested in completing a study designed to evaluate the oil spill impacts on a local level and with a focus on sediment transport with respect to movement of tar balls and contaminants along the beaches and into the bays and estuaries along the Jackson County coastline. Study of this area of the Gulf Coast is important especially since Jackson County plays a major role in the Mississippi Coastal Improvements Program Comprehensive Plan Elements as home to the Pascagoula River, the Dantzler Coastal Preserve, the Franklin Creek Floodway, Bayou Casotte, and others. Salt marshes and wetlands occupy the lowest elevations in Jackson County, especially in the coastal area and along the lower reaches of the Pascagoula River System. Sediments are commonly organically rich silts, clays and to a lesser extent sands. Salt marshes and wetlands are dynamic environments that are continually changing due to natural processes and human activities. They are currently recognized as an important and productive ecosystem that filters surface water, serves as habitat for wildlife, provides storage for floodwater, and affords recreational opportunities. The Study goals and objectives would be to: 1) identify areas of the Jackson County coastline where oil or tar balls remain, this task will facilitate further clean up of the coastal areas of the county, 2) identify areas of the Jackson County coastline where habitat may be degraded due to the presence of oil or tar balls. This task will aid in development of any needed habitat restoration programs, 3) identify areas of the Jackson County coastline where sediment is eroding or accreting, this will aid in understanding the sediment transport regime and prediction of where contaminants may be transported to in the event of another oil spill or other hazardous event, 4) identify areas of the Jackson County coastline where renourishment may be needed; where armoring may be a reasonable alternative as a means of erosion control; or where a living shoreline may be a viable choice for habitat restoration and erosion control, 5) identify areas of the Jackson County coastline where water quality may be degraded due to the oil spill or due to other causes, this will aid in long term restoration efforts and support other water quality improvement programs. The Study will be divided into the following tasks: 1) data collection, 2) data evaluation, 3) report preparation and recommendations.	Jackson	Yes	No	No	No	No	No	No		No		$ 303,000.00	$ -	
	Research and Education	1254	11/22/2013	Marinovich plan to restore the gulf shrimp	Shrimp migrate in from the gulf three times a year.Research need to be done to establish when the shrimp move into the estuaries. On this bases the adult shrimp needs protecting when they move up out of the gulf to spawn. As a net maker I see this happen three times a year. Letting the shrimp spawn correctly will increase the juvenile release from the estuaries.(Letting the eggs, larvae juvenile and adult shrimp come safety into the estuaries without being caught by the shrimp trawls.) When we have maximum spawn we will have maximum juvenile release when the conditions are correct in the estuaries. This will help the ecology (example, more shrimp to feed fish etc.). Over time the shrimp population will increase and there will be more food for the whole ecology. After the migration is established then the law must be fixed in order to protect the shrimp from the nets when they are spawning. This involves changing the opening and closing of the shrimping season. The Marinovich Plan was researched twenty years ago and the shrimpers about 80 percent agreed to it. The Marinovich Plan has the dates when the shrimp spawn because it happen every year; but it has to be proven to the scientific community. Thank you for opportunity to make this proposal. Let work together to save the food for the gulf ecology.	Harrison, Jackson	Yes	Yes	Yes	No	Yes	Yes	No		Yes		$ -	$ -	

	Research and Education	1256	12/3/2013	Develop blue crab aquaculture in Mississippi	The consortium's goal is to expand on existing knowledge of blue crab aquaculture to develop new resources to bring greater economic prosperity to Mississippi and is primarily focused on the soft crab fishery. The main goals of the consortium include3 the following:(1) support expansion of blue crab hatchery capacity to increase seed availability and decrease cost of production,(2)identify small and limited resource farmers and/or fishermen interested in blue crab pond culture,(3)establish a center for development and technical assistance to serve as a resource to participants, and(4)evaluate economic feasibility. We believe this project will have positive economic benefits and are currently seeking opportunities for funding.	Hancock, Harrison, Jackson	Yes	Yes	Yes	No	No	No	No		Yes		$ -	$ -		
	Research and Education	1261	12/4/2013	Mississippi Gulf Coast Arboretum Trail --Coastal Arboretums for Restore Canopy and Reduce Injury	The MS Urban Forest Council is a 30 year old nonprofit organization that works with community leadership and citizen to establish healthy tree canopies. We have the only arboretum program in the state and have been certifying arboretums in Ms for over 10 years. This project addresses community resilience, injury, restoring canopies, economic development, tourism benefits and much more. This project has two phases. Phase I of developing arboretums along the MS Gulf Coast will include 3 arboretum, one per county. The project is to scale, landscape level,easily managed, no land acquisition and shovel ready. We can have trees in the ground as early as six months after approval. This project will fully develop local public green spaces into arborvitae creating a network of linear green spaces. This project has multiple benefits - Community resilience, job training, eco-tourism, economic development, recreation, social and ecological benefits, water quality and storm mitigation, and other benefits. This project will be phase one on creating quality green spaces in the three coastal counties. Three sites (one per county) will be created another 10-20 existing sites will be identified and certified as arboretums. Phase II will include developing an arboretum for every coastal city, (12) sites. In all, a total of 15 arboretums developed and another 15 existing sites that can qualify as an arboretum will be certified. So when the project is complete there will be a minimum of 30 certified arboretums along the coast that can be linked as green way, tourism and promotion of communities and other sites. The arboretum will be included on a GPS system so that citizens and visitors can visit and view these sites. These sites will be highly visible. The value of related water quality functions will be determined for these sites based on i-Tree formulas. The project has four basic components. 1. The key objective is to establish healthy Ms Gulf Coast Arboretae in every city in the 3 counties of the Mississippi Gulf Coast; Harrison, Hancock and Jackson. 2. MUFC already has an established and working network of communities on the Ms Gulf Coast through the Scenic Communities and Tree City USA programs. We will work in partnership with local communities, other organizations and counties to plant perpetual green spaces, and provide management training, job training, and all resources to create sustainable green spaces. There are identified spaces on the coast that will remain forever green. Identified by the Gulf Legacy Inventory and the proposed urban tree canopy inventory. We will combine our efforts with other restore projects to add the urban forestry element. We will provide training and other skills,	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	Yes		Yes	water qual	$ 420,000.00	########		
	Research and Education	1266	12/4/2013	NRDA Project Proposals State of Mississippi May 13, 2011	The Nature Conservancy in Mississippi is pleased to present the following Project Proposals that we feel are eligible for early NRDA funding based on guidance provided in the "Framework for Early Restoration Addressing Injuries Resulting from the Deepwater Horizon Oil Spill" document. These Projects support the conservation and restoration of critical Gulf of Mexico habitat types including sub-tidal oyster reefs, coastal marsh and forest, sea grass beds and acquisition and restoration of critical coastal lands through the existing Coastal Preserve Program of Mississippi administrated by the Mississippi Secretary of State's Office and the Department of marine Resources. Specifically, these projects meet the requirements delineated in paragraph 6 in that they: - Contribute to making the environment and public whole by restoring, rehabilitating, replacing, or acquiring the equivalent of nature resources or services injured as a result of the spill; - Address one or more specific injuries to natural resources or services associated with the incident' - Seek to restore natural resources, habitats or natural resource services of the same type, quality, and of comparable ecological and/or human use value to compensate for identified resource and service losses resulting from the incident; - Are not inconsistent with the anticipated long-term restoration needs and anticipated final restoration plan; and - Are feasible and cost-effective. The Nature Conservancy has been actively engaged in conservation of the Gulf of Mexico ecosystem for nearly 40 years including over 15 years in Mississippi. During that time we have restored or protected hundreds of thousands of acres of a variety of habitat types across the five Gulf states in partnership with our state and federal colleagues as well as private landowners and businesses. We are well-versed on the ecology of the Gulf and are expert at developing, implementing, and monitoring restoration projects. 1. Hancock County wetlands stabilization and oyster restoration project 2. Restoration and enhancement of coastal marsh and transitional forests in Coastal Mississippi 3. Using living shoreline technology to mitigate the effects of previously hardened shorelines 4. Living shorelines - wetlands restoration projects, Mississippi Gulf Coast, Harrison and Jackson Counties 5. Sub-tidal oyster reef restoration in Biloxi Bay, Mississippi 6. Sub-tidal oyster reef restoration in Bay St. Louis, Mississippi 7. Mississippi Coast wide seagrass community based conservation program 8. Acquisition of property on Round Island, Jackson County, MS	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 51,535,865.00	$ -		
	Research and Education	1298	1/3/2014	Study of Potential for Contaimination of Raw Water Intake at Cumbest Bluff	The county and port authority own and operate a raw water intake for industrial water supply at Cumbest Bluff on the Pascagoula River. This supply is being used for the Authority's Surface Water Treatment Plant currently in construction. The treatment facility will provide potable water for the southern portion of the East Regional Water System and other potential wholesale water customers in the future such as the Helena Utility District. The mouth of the river at the Mississippi Sound has many possible sources of contamination including chemical manufacturers, oil and gas industry, etc. The Authority proposes to have a study completed to evaluate the possibility of contamination of the water supply from events such as natural disasters, sea level rise, saltwater, etc. Expected questions are, (1) is there any real potential from contamination from the industry along the coast line? (2) what kinds of events have the potential to contaminate the water supply? (3) what recommendations or procedures are necessary to protect the water supply as a supplement to our emergency plans.	Jackson	Yes	No	No	No	No	No	Yes		Yes		$ 500,000.00	$ -		
	Research and Education	1582	7/7/2011	Bay St. Louis Harbor	(ORIGINAL ID#521) To develop a harbor in downtown Bay St. Louis as a catalyst for restoring eco-tourism in Hancock County	Hancock	Yes	No	No	Yes	No	Yes	Yes		No		$ -	$ -		
	Research and Education	1583	7/7/2011	Mississippi By-ways to Space & Mississippi Scenic Beach Boulevard By-ways	(ORIGINAL ID#522) 43 miles of eco tourism by-ways connecting the INFINITY Science Center to the outdoor laboratory to re-establish the visitor market for the gulf coast region	Hancock	Yes	No	No	Yes	No	Yes	Yes		No		$ -	$ -		

	Research and Education	1589	8/2/2011	Maritime & Seafood Industry Museum Expansion with Restoration Initiatives	(ORIGINAL ID#761]The Maritime & Seafood Industry Museum located on Pt. Cadet, Harrison County, Biloxi, MS serves as a welcoming beacon to the great City of Biloxi, an educational tool and a superior exhibit, for residents and visitors of the Mississippi Gulf Coast region, and for the great state of Mississippi. The Museum was established in March 1986 to preserve and interpret the maritime history and heritage of Biloxi and the Mississippi Gulf Coast, which came to prominence more than a century ago as one of the worldâ€™s great seafood producers. Since itâ€™s opening, the Maritime and Seafood Industry Museum has become recognized for its interpretation of Mississippi Gulf Coast history, culture, and heritage. The Museum exhibits, the replicated sailing schooners, the educational programs, the schooner pier complex, and the research collections have proven invaluable to the citizenry of Mississippi as well as national and international clientele. Special programs held within the museum, has seen it featured on regional and national television. The Museum expanded another 8,000 sq. ft. in 2003 and in 2005 was destroyed by Hurricane Katrina. The new three story 20,000 sq. ft. museum reopened in August 2014 at a cost of approximately $10 million. Since 1986, the Museum has been on a steady path of accomplishment â€" from our award-winning building to our exhibits and tools â€" but there is much more to accomplish. Our educational and economic impact within the community, the region and the state has made the Maritime and Seafood Industry Museum a destination of enjoyment and a significant economic contributor. Our $8 million expansion would build a state of the art Exhibit Hall that will play host to world class traveling exhibits. The Museum is convinced the addition of the Exhibit Hall will elevate the Museum experience and enhance the regional economy through the distribution of admission dollars and funds raised from sponsored traveling exhibits. It would also enable the Museum a larger venue for convention space for one night events away from the Casinos. Tourism is frequently seen as a way of creating new employment opportunities in regions which have suffered from devastating hurricanes or oil spills. Mississippiâ€™s Gulf Coast has embraced the tourist industry, bringing in major casinos and support services to keep tourist engaged. Visitors stay at hotels, eat at restaurants, visit cultural sites and consume goods and services within a local economy. This serves as an economic boon to drive benefits across many other sectors. Regional museums are an important magnet to draw visitors, as they flavor the experience, present the regionâ€™s history, display their treasures and share the artistic and cultural essence of the region. Giving visitors a variety of exciting activities and events impacts their experience and ensures their return. Recently published reports from the American Alliance of Museums, show indisputable evidence that museums are true	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 7,549,904.00	$ -		
	Research and Education	1607	10/25/2011	GULF OF MEXICO HATCHERY AND FISHERIES RESTORATION CONSORTIUM	(ORIGINAL ID#11419) Problem: The Deepwater Horizon Oil Release (DWH) caused environmental and economic damage to fisheries in the northern Gulf of Mexico. America must employ novel and effective approaches to restore both economic and environmental wellbeing of the affected fisheries. In addition, habitat destruction caused by hurricanes and other man-made causes (over-fishing, erosion and spills) have led to significant decrease in Gulf fish populations during the last decade. Solution: Marine aquaculture of key species can be employed to restore fisheries through restocking and to restore economic vitality through technology transfer and stimulation of small businesses resulting in job creation. This effort should be highly collaborative involving institutions in all five Gulf States as well as other national and international institutions, public and private, with significant hatchery technologies. Implementation Team: Gulf of Mexico Hatchery and Fisheries Restoration Consortium. - Gulf Coast Research Laboratory/University of Southern Mississippi (GCRL; lead institution) - University of Texas Marine Science Institute (UTMSI) - Louisiana University Marine Consortium (LUMCON) - Auburn University (AU) - Mote Marine Laboratory (MML) - University of Maryland- Baltimore (UMB) These institutions are leaders in marine aquaculture and stock enhancement research, implementation, and technology transfer for the northern GOM. The consortium is built on established relationships and will employ the highest quality science and economic approaches to implement, and transfer the technology to raise significant numbers of fish for fishery restoration and to stimulate private sector small business development. In addition to the implementation team, the consortium has established scientific, governmental agency and commercial advisory teams. Implementation Plan: The technology for aquaculture and fishery restoration of marine fish varies among species. This necessitates the collaborative invo lvement of these 6 leading institutions that have conducted research on over 10 of the most economically and ecologically important Gulf fish species. Among the species are those for which the technology to implement stocking, technology transfer, and business stimulation already exists. The species targeted for immediate implementation of stocking and technology transfer include Red Drum, Spotted Sea Trout, Red Snapper, White Shrimp, Bull Minnows, Croaker, Florida Pompano, Cobia, Greater Amberjack and Southern Flounder. Projected Results: The work of the consortium will result in advanced technologies for use by Gulf States fishery agencies and private industry. Similar efforts in the Mediterranean Sea led to a $1 Billion industry in 10 years. The 2007 NOAA aquaculture plan projects 75,000 jobs created for every million tons of seafood produced by aquaculture. It is estimated that aquaculture of Gulf fish species would double the seafood output of the Gulf of Mexico ($700 Million in 2008). Additionally the recreational fishing industry (>$12 Billion in 2008) would realize expanded employment and business opportunities as natural populations are restocked with hatchery produced fingerlings.	n/a	Yes	Yes	No	No	No	Yes	No		No		$ 60,000,000.00	$ -		
	Research and Education	1623	7/2/2012	Enhancing Remnant Wetlands to Decrease the Impacts to Coastal Degradation	(ORIGINAL ID#11717) The TNC-MS Chapter's Freshwater Program proposes to implement controlled drainage practices on remnant oxbow wetlands in the Mississippi Delta. While serving as a drainage catchment, installation of an innovative surface controlled drainage strategy, low-grade weir, in the systems outflow channel would create a series of in-stream wetlands with in the systems channel. These in-stream wetlands will aide in altering flow velocities of runoff entering these remnant systems and provide the very important service of first flush capture of nonpoint source pollutants that would have eventually exited the system. These pollutants are derived from the agricultural production in the region that is ubiquitous in its use of inorganic fertilizers to increase crop yields, which in turn, often result in the delivery of high nutrient loads from the landscape to adjacent receiving waters. It is these nutrient loads, mainly nitrate-N, associated with these watersheds that are rooted deeply in the causes of coastal ecosystem degradation and eutrophication. This is no more prevalent than in the hypoxic zone off of the Mississippi coast in the Gulf of Mexico. Several thousand acres of remnant oxbow wetlands in the Mississippi Delta currently go unmanaged. These systems could significantly contribute to decreasing nitrate-N concentrations and loads reaching Mississippi's coastal ecosystem while also serving as a critical significant surface water source capable of providing sustainable irrigation supplies as well as needed in stream flows. Using remote sensing data through the Light Detection and Ranging (LIDAR) software we were able to determine precise water volumes associated with water elevation fluxes of several remnant oxbow wetland systems. Two of the systems alone would have a combined water storage capacity of 1,500,000,000 liters following implementation. Project sites would be modeled and replicated for future projects of its kind aimed at enhancing water quality and sec uring an additional sustainable water supply in the Delta's watersheds by using the landscape's natural features. The project is in the preliminary stages and although we have a strong consensus from the private landowners, the most important steps include securing funding for the project and potentially leveraging that funding with other interested partners. Project sites range from the northern to southern portions of the Mississippi Delta region and are dependent on funds allocated. Funds from the Restore Act would aide in enhancing critical wetland habitat to decrease the impacts to downstream water quality, with the added potential to provide data that would establish these remnant wetlands as an additional sustainable water supply that could be managed and is needed in this region's irrigation-dependent agricultural economy. The agriculture community has begun to embrace the notion of water resource conservation, but alternative strategies are actively being sought. Failure of the conservation community and associated partners in this region to engage in this process will represent a lost opportunity with wide ranging implications.	n/a	Yes	No	No	No	No	Yes	Yes		No		$ 1,000,000.00	$ -		

	Research and Education	1625	10/16/2012	Enhancement of the existing DMR Smart Growth and Sustainability Model Utilizing Geographic Information Systems (GIS) Technology and Coast-Specific Data for the Lower Three Coastal Counties (Hancock, Harrison and Jackson Counties)	(ORIGINAL ID#11835) The Mississippi Department of Marine Resources (DMR) is pleased to provide this proposal to develop an enhanced smart growth and sustainability model for the lower three coastal counties (Hancock, Harrison and Jackson Counties) and the cities and communities within the three lower counties utilizing the latest GIS technology and coast-specific data. DMR proposes to complement and enhance on-going DMR/DEQ coastal restoration efforts by providing a tool for use by local governments, private interests, and the general public that will identify and highlight opportunities for continued smart growth and sustainable development in coastal Mississippi. We envision this as being a phased project, with the first phase focusing on the model development for the three lower coastal counties, and as funds are available, DMR hopes to expand the model to include Pearl River, Stone and George Counties in the future. In summary the model will include the following: - Enhancement of the existing Smart Growth and Sustainability GIS Model through the incorporation of additional existing data sets and creation of new data sets designed to provide local stakeholders with a decision making tool to assist with growth and development in Coastal Mississippi; estimated cost: $1,750,000. Introduction: In December 2009, the Office of Coastal Management and Planning (CMP) of the Mississippi Department of Marine Resources (DMR) hired Eco-Systems and began development of a series of tools designed to provide coastal Mississippi with the necessary resources to make informed decisions with regards to growth, development, environmental restoration, and resiliency. With Smart Growth and Sustainability as the guiding principles, Eco-Systems and CMP worked to develop an internet-based Smart Growth and Sustainability Toolbox for coastal Mississippi. The primary principles of Smart Growth encourage: - Development that includes a compatible mixture of land uses, - A focus on compact building design t o maximize density where appropriate, - Creation of a range of housing opportunities and choices, - Creation of walkable and pedestrian friendly neighborhoods and business districts, - The creation of distinctive and attractive communities with a strong sense of place, - Preservation of open space, farmlands, natural beauty, and critical environmental areas, - Development directed towards existing communities to take advantage of existing infrastructure and to reduce urban sprawl, - A variety of transportation choices, - Policies that make development decisions predictable, fair, and cost effective, and - Community and stakeholder collaboration in development decisions. The Coastal Mississippi Smart Growth and Sustainability Toolbox and the GIS Smart Growth Model condensed these ten principles into five primary concepts designed to illustrate existing smart growth and sustainable developments and to encourage new developments to follow suit. These concepts include: - Community Character, - Transportation Choices, - Resiliency and Natural Hazards, - Policy in Practice, and - Growing Green. The GIS Model, as it currently exists is a raster-based model that includes a number of data-sets from the six coastal counties. These data-sets combined, provide a tool for the user to identify areas of	Hancock, Harrison, Jackson	Yes	No	No	No	No	Yes	No		No		$ 1,750,000.00	$ -	
	Research and Education	1629	3/20/2013	Mississippi Watershed Structure Restoration Project	(ORIGINAL ID#11936) 1) BACKGROUND OF RC&D PROGRAM -The North Central Mississippi Resource Conservation & Development Council (NCRCD) covers 10 counties in North Mississippi. The NCRC&D is a 501 c3 non-profit organization made up of volunteers who identify needs in our communities and find solutions that work. Our Council's sponsors are the Board of Supervisors and Soil & Water Conservation Districts. 2) NATURAL RESOURCE DAMAGE- The NCRCD recognizes the need to fund a project to restore or rehab approximately 77 watershed structures that are near failing. Most structures will require new pipes installed, dirt work, and woody vegetation removed from these dams. These water control structures were built in the late 1950s-1960s by USDA, Soil Conservation Service along deep channels for erosion control purposes. Over the past 60 years they have trapped tons of nutrients and sediment. Not if, but when these structures fail, sediment and nutrients will pollute streams on down to the Gulf of Mexico. 3) EXECUTIVE SUMMARY- Goal is to restore or rehab 77 water control structures back to original designs in Mississippi watersheds that include: Little Tallahatchie, Coldwater, Horn Lake-Nonconnah, and Wolf River. The NCRCD is capable of administering this project. 4) ACTION PLAN -The NCRCD will be responsible for project coordination and seeing that the project is completed in a timely and efficient manner. The action plan includes the following: A) NCRCD and Watershed District or local sponsor will obtain easements B) USDA- Natural Resources Conservation Service will provide as-built plans (designs already completed) and will provide personnel to inspect the rehab of structures as matching funds for the project C)NCRCD will provide assistance in obtaining copies of as-built-plans, bid advertisements, bid packages, contracting, payments, and final reports D)NCRCD will provide sub-grants to local organizations and/or certified engineers if needed. 5)BUDGET- A) 77 Water Control Structures Restored ($2 ,475,000) B) Project Coordination - Easements, Contracting, Misc. Engineering ($200,000) C) Travel($15,000) D)NCRCD- 4% Administrative Fee ($107,000) E)In-Kind Matching Funds USDA-NRCS($450,000) 6) EVALUATION OF PROJECT- A)Number structures restored B)Efficiency & timeliness of project completion C) Reduction of sediment and nutrients into the Gulf of Mexico.	Panola	Yes	No	No	No	No	Yes	Yes		No		$ 2,797,000.00	########	
	Research and Education	1630	3/20/2013	Mississippi On-Site Wastewater Treatment Project	(ORIGINAL ID#11937) 1) BACKGROUND OF RC&D PROGRAM -The Mississippi Association of Resource Conservation & Development Councils (MARCDC) has 7 local Resource Conservation & Development (RC&D) Councils that cover the entire state of Mississippi. The MARCDC & RC&Ds are 501c3 non-profit organizations made up of volunteers who identify unmet needs in their communities and create solutions that work. 2) NATURAL RESOURCE DAMAGE- The MARCDC recognizes the need to fund a statewide project to address environmental damage caused by rural homeowners with failing septic tanks & homes without septic tanks (straight line pipes) to protect upstream damage from polluting streams that drain into the Gulf of Mexico. According to the Mississippi Department of Health(MDOH), 425,000 homes or 40% of homes are not connected to sewer systems located in rural areas of the state. A MDOH official estimated 15-20% of rural homeowners statewide have failing septic tanks or without septic tanks. 3) EXECUTIVE SUMMARY- Goal is to install a minimum of 200 wastewater treatment systems in existing low-income households within rural areas of MS. The MARCDC is capable of administering this project. Plan is to give sub-grants to local groups such as; RC&D Councils, Conservation Districts, Health Dept. Boards, and other community groups. 4) ACTION PLAN -The MARCDC will make sub-grants to local organizations to allow septic tanks to be installed in a timely and efficient manner. Local organizations will work with local health departments to complete these activities; A) homeowner completes application B)health department determines homeowner eligibility rating ()health department makes on-site evaluation & system type needed D)eligibile homeowners receives septic system maintenance training E) groups of at least 5 septic tanks will be advertised in the local newspaper F)mailletter to eligible homeowners G)open bids and award contracts to certified contractors H)health dept. certifies work meets standards. 5)BUDGET- A) 200 Se ptic Tanks installed ($1 ,000,000) B) Project Coordination- Local Organizations ($160,000) C) MARCDC- 4% Administrative Fee ($46,400) 6) EVALUATION OF PROJECT- A)Number of septic tanks installed B)Efficiency & timeliness of project completion ()Reduction of fecal coliform bacteria into the Gulf of Mexico.	Tate	Yes	No	No	No	No	Yes	Yes		No		$ 1,206,400.00	$ -	
	Research and Education	1634	4/30/2013	Flood Water Retardation Watershed Structure Rehabilitation	(ORIGINAL ID#11969) We have a need to renovate and bring back up to standards flood water retardation watershed structures. These dams were build in the 1960-1970 time period to reduce down stream flooding and control erosion. These structures are still functioning in that capasity but the metal trash racks are in need of replacement. These dams have and are still providing a great service in controled runoff of sediment, water and nutrients from towns and agricultural lands. Because of the rusting of the metal trash racks and some woody vegetaion on emergency spillways, the local watershed districts are in need of financial assistance to conduct this type of maintenance. These local watershed districts do carry out some annual maintenance but are not financially able to preform these type of overhauls. If these dams are not brought back up to current mandated standards, these dams would be breached allowing the 40-50 years of trapped sediment, nutrients and possible pesticides to be released into the down stream waterways. And the increased flood hazard would indanger many homes, businesses and highways, railroads, utility services, wetlands and agricultural lands. These watershed areas all drain to the Gulf of Mexico by way of the Tombigbee River. The areas above these dams have created wetlands that are important to local wildlife and migritory birds.	Prentiss, Lee, Alcorn, Tishomingo, Chickasaw, Calhoun, Webster	Yes	No	No	Yes	No	Yes	Yes	10	No		$ 400,000.00	########	

	Research and Education	1636	5/16/2013	Reduction of Nutrients and Sediments from Agricultural Lands	(ORIGINAL ID#11976) This project would involve landowners with livestock on land ajacent to field ditches, creeks, streams and waterways to reduce the amount of nutrient and sediments entering the stream flow. This would involve assistance to landowners with fencing out of streams, improvements to pasture grass conditions, water sources, feeding areas, grazing rotations and educational meetings to assistance landowners in best management practices and to learn about other sources of funding. This project would reduce the amount of nutrients and sediments entering the waters that flow into the Tombigbee river basin and then the Gulf of Mexico. This would be administered through the NE Miss. RC&D with the assistance of the local Soil and Water Conservation Districts and Miss. Soil and Water Conservation Commission and the Natural Resources Conservation Service office.	Alcorn, Tishomingo, Lee, Itawamba, Prentiss, Chickasaw, Calhoun, Clay, Monroe, Lowndes, Oktibbeha, Webster, Choctaw, Noxubee, Kemper	Yes	No	No	No	No	Yes	Yes		Yes		$ 1,750,000.00	$ -	
	Research and Education	1637	5/16/2013	Wetlands use as nutrient traps	(ORIGINAL ID#11977) This project would be use to reduce nutrients in stream waters by directing waters from grazing and croplands into created wetlands. This project would assisted interested landowners in the creation 1 to 15 ac. size wetlands with flash board riser type water control sturctures to regulate water levels and provide still water areas to settle nutrients and sediment from near by agricultural lands. Open areas would be planted to plants favored by water fowl and aquatic wildlife. Assistance would be provided for planning, engineering, construction and management of these areas as well as education for long term management long after this program ends.	Clay, Oktibbeha	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 110,000.00	$ -	
	Research and Education	1645	7/12/2013	Establishing Institute for Biodiversity Studies at the GCRL	(ORIGINAL ID#12031) An Institute for Biodiversity Studies will be created with the purpose of conducting long-term ecological studies of wildlife in the lower Pascagoula River and associated estuary. The institute will be housed at the GCRL or Cedar Point Campus and will unite and house the GCRL Museum vertebrate and invertebrate collections in a new visitor friendly facility. The Institute will also facilitate research projects from outside agencies, collaborate with the Pascagoula River Audubon Center, and serve as a repository for specimens collected associated with the Audubon All Taxa Inventory Initiative, as well as continue to serve in its regular capacity as a premier regional lending repository for marine specimens from the Gulf of Mexico. The institute will provide taxonomic training and guidance to USM Coastal Science graduate students, contribute to the USM Marine Education Center Summer Program, and employ undergraduate students interested in museum and ecosystem- based studies. The institute would make a logical home office for the Gulf and Caribbean Reports.	Jackson	Yes	No	No	No	No	No	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	1655	8/11/2013	Greenhouse for Producing Restoration Nursery Stock	(ORIGINAL ID#12070) Many current and future restoration projects along the Mississippi Gulf Coast will have need of quality nursery stock of native dune and marsh plants. Currently, large projects in Mississippi must purchase plant stock from nurseries in other states (usually Florida). The genetic provenance of these plants is usually hundreds of miles away from the project where the plant material is needed. We propose to construct a greenhouse at the Lake Thoreau Environmental Center (LTEC) in Hattiesburg, MS to serve as a facility to produce quality, locally-grown nursery stock for Mississippi restoration projects that require installation of native plant species. Currently, no such facility exists in Mississippi. There is a small greenhouse located at the Gulf Coast Research Laboratory in Ocean Springs, MS but it is not large enough to handle the capacity necessary for large restoration projects. The LTEC is a 291-acre preserve located 4.5 miles east of the campus of the University of Southern Mississippi (USM). The preserve is owned by USM and is managed by the Department of Biological Sciences. One of the primary functions of this facility is to provide quality environmental education for citizens of south Mississippi. In March 2013, USM constructed a new building at LTEC to house the university's herbarium and fish museum as well as a new classroom to be used specifically for environmental education. The building's architects designed the building to be modular and they have already drafted preliminary plans for this greenhouse to be added to the facility. An additional benefit to locating this facility at LTEC is that it offers protection from coastal storms. Preliminary planning and site selection for this project has already been completed. Infrastructure for the project (water, power, and sewer) has already been installed. If selected as a Restoration Project, we would be able to have the facility completed within six months and would be able to have nursery st ock available for use within 6-8 months after completion of construction.	Forrest	Yes	No	No	No	No	Yes	No		No		$ 850,000.00	$ -	
	Research and Education	1659	1/17/2014	Greenways	A strong pedestrian and bicycle network of paths between parks, natural amenities and community services will enhance access to nature, meeting space, fitness opportunities, sports venues, and child-friendly playgrounds. The Greenways project will connect other major projects (Historic Pathways, Lighthouse Park, Riverfront Redevelopment, Beach Promenade, Point Park, Spinnaker Point) with a safe, inviting pathway. Major elements of the project include property acquisition, development of natural buffer zones near waterways, restoration of previously disturbed channels and bayous, wetland and marsh enhancement, boardwalk and pathway construction, lighting, and signage for information and educational purposes.	Jackson	Yes	No	No	Yes	No	Yes	Yes	55	Yes		$ 33,822,868.50	$ -	
	Research and Education	1712	12/24/2015	BP for restoring the gulf fisheries	This program will address fishery management needs in the Gulf of Mexico for the commercial, CFH and the recreational anglers. This "BluePrint for Restoring The Gulf Fisheries will be lost if not funded . This program will provide help with discards of reef fish, provide Seafood for the Consumer and provide a pilot program To test a method that will allow anglers the opportunity to fish all year for red snapper and grouper. This program will also allow the opportunity to study behavioral science. This program will address accountability and sustainability of our coastal marine resource and those that rely upon the resource for food , jobs and pleasure. The programs infrastructure contain many components. This program will Include state agency's , commercial, CFH and private anglers. It will also have help from the Southeast science center with its design. A full proposal will be submitted if the council feels they are interested in a proposal that would test a license limitation for our recreational anglers. The fish would be leased from the present commercial quota so that it would not impact the regular open season. It would also collect data that is presently missing and needed inorder to have a sustainable fishery for years to come. It will cost 31/2 million to lease the fish for the pilot study. The remaining amount will be spent on outreach. Forms, Techs. Tags , PI, analysis etc.	Harrison, Hancock, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	15	Yes	Data need	$ 5,000,000.00	$ -	

	Research and Education	1716	2/6/2014	Proposed RESTORE Fund Land Acquisistions	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural or scenic significance in the counties of the Mississippi coastal Plain. This proposal is intended to provide a brief overview of several properties the Land Trust for the Mississippi Coastal Plain has determined to be in line with the goals set forth in the Gulf Coast Ecosystem Restoration Council's Proposed Comprehensive Plan entitled, The path Forward to Restoring the Gulf Coast: A Proposed comprehensive Plan: 1) Restore and Conserve Habitat 2) Restore Water Quality 3) Replenish and Protect Living Coastal and Marine Resources 4) Enhance Community Resilience 5) Restore and Revitalize the Gulf Economy. The proposed properties are dispersed throughout three of the six coastal counties in which the Land Trust for the Mississippi Coastal Plain Operates. Jackson County: Graveline Bayou-Cumbest 369 acres, Graveline Bayou-Whitehead 739.67 acres, Graveline Bayou-Mahoney 6.99 acres, Seapoint 16.64 acres, Bluff Creek 59.14 acres, Brickyard Bayou 138.82 acres; Harrison County: Turkey Creek 634.17 acres, Canal Land 218.50 acres; Hancock County: North Beach 41.169 acres, Ansley Area 331.57 acres, Magnolia Branch 19.89 acres, Cure Land Co. 132.85 acres. The attached document is designed to illustrate the value each of these properties holds. Acquisition of any one of these proposed sites and its subsequent conservation will increase property, economic, and aesthetic value of the area in which the site is located. The properties, if acquired by the Land Trust for the Mississippi Coastal Plain, all have the potential to restore and conserve habitats by providing havens for our unique coastal habitats and all species that reside within them. They can restore water quality by protecting our watersheds and, in turn, our water supply clean. They can enhance community resilience by offering educational opportunities and revitalize the Gulf economy by creating interesting new low-impact recreational spaces where adults, children, citizens, and visitors can fully immerse themselves in the beauty and intrigue of the Mississippi Gulf Coast in its restored natural state. Funding these acquisitions will ensure a legacy is left for our future, as RESTORE funds are meant to do.	Harrison, Hancock, Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -	
	Research and Education	1719	2/6/2014	Harper-McCaughan Wetland Boardwalk/Nature Trail	An area of wetlands is bordered by Harper-McCaughan Elementary School to the east and a Power line corridor paralleling Canal Number 1. We would like a raised boardwalk/nature trail with education stations built. The area has a variety of trees and plants along with a multitude of Birds.	Harrison	Yes	No	No	Yes	No	No	Yes		No		$ -	$ -	
	Research and Education	1723	2/7/2014	Restore MS Endangered species	My proposal is to locate video camera on some of the piers/bridges in our coastal communities to help document the interactions of sea turtles with fishing gear. By doing so it will help to provide data for the science center to analysis to see what they can recommend to the anglers that are coming in contact with the turtle While fishing from these piers / bridges. I am aware of 11 or 12 piers where fishermen are coming in contact with two hundred or more Endangered species of turtles around these piers since the oil spill. This study will also help provide the effort data . The second part of the program is to provide some type of education about what the anglers can do to minimize contact and inter action with these turtles. There will be a outreach component of the study to interview those that do fish from the piers and document their interactions and their success of releasing the turtles unharmed. The cameras will also help ground truth what is taking place on these fishing piers as they relate to the interactions under the endangered species Act.	All MS Counties	Yes	No	No	Yes	No	Yes	Yes		No		$ 15,000,000.00	$ -	
	Research and Education	1733	2/10/2014	Gulfport Urban Estuaries Enhancement	Turkey Creek Watershed covers approximately 11,000 acres in Gulfport, Long Beach, and Harrison County. The watershedâ€™s two (2) main waterbodies are in need of significant restoration and enhancement. Turkey Creek and Brickyard Bayou are approximately 14 miles and 5 miles long, respectively. Both waterbodies are slow-moving coastal streams/tidal creeks that flow into ecologically important, sheltered estuarine ecosystems connected to the Back Bay of Biloxi and the Gulf of Mexico. This project will restore and enhance these individual estuarine streams to provide an aquatic corridor that serves as a sheltered nursery and as a rearing area for multiple saltwater fish species including those with recreational and commercial value. In addition, recovering the ecological health of these small estuaries would allow them to provide a sheltered refuge for larger and more mature fish during natural or anthropogenic events such as storms, droughts, or oil spills. Enhancements to Turkey Creek will further offer an opportunity to actively organize and empower a local minority committee in designing, permitting, constructing and maintaining a socially acceptable restoration effort. Leah Manhanâ€™s 2013 film, â€œCome Hell or High Water: the Battle for Turkey Creek,â€ describes the history of Turkey Creek, and the detrimental effects of human activity, land development, and natural occurrences. In 2006, a report was prepared by the â€œLand Trust for the Mississippi Coastal Plainâ€ entitled â€œWatershed Implementation Plan for the Turkey Creek Watershedâ€ (funding from the Environmental Protection Agency Region IV). This report, focusing on Turkey Creek, confirmed that Turkey Creek, like Brickyard Bayou and the entire Turkey Creek watershed, faces environmental degradation from: filing of wetlands, channelization, trash and debris, unregulated development and construction, uncontrolled stormwater increases, aquatic, terrestrial, and riparian habitat dilapidation, invasive species (particularly Chinese Tallow and cogongrass), and chemical contamination. Accordingly, Turkey Creek and Brickyard Bayou require similar restoration and enhancement efforts including, but not limited to: cleaning up debris and sediment, de-snagging and de-mucking, wetlands restoration, natural bank stabilization, and general enhancement. These activities would employ low-impact, EPA approved green infrastructure materials and techniques to the maximum extent possible supplemented by traditional best management engineering when necessary to maximize the Creeksâ€™ capacity to capture, temporarily store, and treat urban storm and flood waters. Emphasis will be placed on selective removal of invasive species and reestablishment of native vegetation, within the creek banks, thereby encouraging storm water	Harrison	Yes	No	No	Yes	No	Yes	Yes		No		$ 13,000,000.00	$ -	
	Research and Education	1749	2/18/2014	City of Waveland Sports Complex and Entertainment Venue	The scope of our project is to build a football complex and recreational venue that will support over 200 children on a weekly basis and to provide a safe and secure location for fun raising activities to support the up keep of the facilities. The proposal is to construct two lighted football fields for children from pee-wee to high school age, with concession area and open space where other events like soccer, Easter egg hunts, trick or treat events, open air concerts or movies could be seen, and other community outreach events could be held. The land is situated along one of the cityâ€™s major thorough-fares and is also located less than a mile from over 1100 Section 42 apartments. The proposed site, we believe will have far reaching effects on all of the children in our community as well as creating some long term economic benefits to our area. The fields could be used in cooperation with other recreational facilities in our area to support larger tournaments and providing a huge economic impact to the entire county. The Bay-Waveland football League has acquired a long-term lease of approximately 8 acres of cleared property at a rate of $1.00 per year from the Bay-Waveland Housing Authority. The property prior to August 2005 was a public housing site, the site was destroyed during Hurricane Katrina and the housing authority chose to rebuild the homes at a different location. The authority agreed at that time it was in the best interest of the community to use the land for recreational purposes and entered into a contract with the football league to support the development of the children in the area. The land was previously developed and is believed to have no environmental issues. All debris and rubble have been removed, and the land has been cut and some maintenance and repairs to the fence along Waveland Avenue have been completed.	Hancock	Yes	No	Yes	Yes	No	No	Yes		Yes		$ 2.80	$ -	
	Research and Education	1754	2/19/2014	College and High School Ecological Partnership	Develop a 250 yard stretch property that will facilitate botanical and zoological collaborative experiments. This will include developing access-ways to marsh and wetlands and equipment to conduct experiments.	Jackson	Yes	No	No	No	No	No	Yes		No		$ -	$ -	

	Research and Education	1759	6/1/2014	Waveland Recreational Light House and Water Front Development Project	The City of Waveland is a family-oriented community and is frequented by seasonal one-day visitors and weekenders that populate the area which make up the bulk of the summer tourist cache. The City of Waveland plans has designed, a two story, handicapped accessible open-air pavilion that would turn into a venue for special events such as weddings, concerts and reunions. This magnificent open air shelter will provide a picturesque setting for picnics, benefits, special events, outdoor classroom space, fishing rodeos weigh-ins, public concerts, parties and covered area for beach volleyball tournaments. The covered floor area of the open air pavilion will be approximately 2,940 square feet with a 2,940 square foot upper floor observation deck or viewing terrace using a lighthouse style elevator shaft. The upper deck will also include restroom facilities, benches, optical viewers and information boards designed to identify local wildlife and marine animals. Ample electrical outlets, for the lighting underneath the pavilion, will be added to provide the appropriate ambiance for any event. At the pavilion, families and friends of all ages can bring the magic of live entertainment and the performing arts to the City of Waveland in a whole new way â€" under the stars for everyone to enjoy! The Cityâ€™s vision is to have the pavilion available for community use that will allow everyone to share in the benefits of having a covered structure on the beach. With this in mind, it creates such place for our visitors a myriad of benefits and the enjoyment of the outdoor setting. The new open-air pavilion will make use of a solid structure nestled on the beach with a territorial view all opened to allow the soft, warm spring air breeze. This will create a hub for public town meeting, year round structured activity, associated festival, athletic events, health and exercise programs, youth education opportunities, and a centralized place to share community and public information while having a cornerstone that tourist and visitors can visit frequent. The City has made use of awarded tide-lands funds on adjacent areas of the beach that will be enhanced by the construction of the Lighthouse Pavilion Project. The city has constructed roughly two miles of concrete walking path to the south of the proposed site that now promotes pedestrian and bicycle travel from Washington St. in the neighboring City of Bat St. Louis to the end of the sand beach almost to Buccaneer State Park. The adjacent property also to the south is a Veterans War Memorial constructed originally by American Legion Post 77 and is in the process of being reconstructed and armored due to damage caused by Hurricane Isaac. The city took tidelands funds and assisted in the reconstruction to make the memorial more handicapped assessable and more user friendly. Benches as well as new concrete sidewalks to allow better access to the water will also been installed. The property directly to the north is the home of the Garfield-Ladner Memorial Pier, which is a lit fishing pier that is awaiting	Hancock	Yes	Yes	Yes	Yes	No	No	Yes	10	Yes		$ 3,800,000.00	#######	
	Research and Education	1763	2/22/2014	Brick Bayou restoration project	Debris removal from the Brick Bayou streams which runs from the mouth of the escatawpa river into the Pascagoula river and run along side of the Hwy 613. The city would like to restore Brick Bayou because it runs through Saracenia Wetlands consisting of 35 acres of wetlands which runs from Hwy 613 to Hwy 63. The project would include a wetland delineation which would determine the amount of land that can be used for other purposes such as nature trails, sport complex, Police firing ranges and fire figthers training fields	Jackson	Yes	No	No	Yes	No	Yes	Yes	50	Yes		$ 300,000.00	$ -	
	Research and Education	1764	2/24/2014	Medical Monitoring Program of Coastal Mississippians	This Request for Funding should be granted because it is one of the few proposals submitted for consideration which seeks to achieve several of the specific goals and objectives originally sought to be addressed by the Trustees of the BP Restoration Fund. The Proposal that follows will sever to promote proactive environmental and cultural stewardship, education and outreach based on the gathering of real time data outlining how and to what extent, if at all, the substance released during the BO oil spill and the agents used to disperse the same has or will impact and/or affect the health of those persons living within the three-county, Mississippi Gulf Coast, area of South Mississippi who were directly or indirectly exposed to the released substance and/or the agents used to disperse the release substance. Form strictly an educational point of view, data will be gathered and disseminated to the MDEQ, EPA, DOI, CDC, Mississippi State Board of Public Health and any other regulatory bodies whose jurisdiction requires notification should there be evidence of any type of alarming trend related to a claimed exposure. Additionally, by capturing such data this will allow us to measure the human toll, if any, proximately related to the exposure to the substance and to identify the proper medical or treatment plans of care that produces the best and most expeditious outcomes. having such information at our disposal will better equip our nation and more specifically the State of Mississippi and the entire Gulf Coast Region with the knowledge to properly respond to similar spills and/or release in the future. Another anticipated byproduct of implementation herein of the proposed medical monitoring system will be a healthier South Mississippi. Through the use and implementation of preventive healthcare techniques, physician led and sponsored encouragement, proactive and preventative healthcare maintenance, it is believed that recreational prowessness among many who live within the three-county Mississippi Gulf Coast area will become the watch-word of the day and we will see individuals who will begin to strive to attain and live a more healthy lifestyle. Finally, funding of this request will have a specific intangible benefit of increasing the public's confidence that an independent group of healthcare professionals are monitoring the potential health effects of the oil spill as it relates to South Mississippians who may have been exposed to the same, either directly or indirectly, and that such group of diverse professionals are positioned to disseminate accurate and unbiased information. This will help to dispel much of the misinformation that has been disseminated by parties on every side of this controversy.	Hancock, Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	Yes	27.6	Yes		$ 14,121,000.00	$ -	
	Research and Education	1771	3/20/2014	Bangs Lake Viewing Pier and Park	In an effort to provide increased access to natural resources, the bangs Lake Viewing Pier and Park will increase the ecological value of the area by providing a viewing center pavilion, fishing pier, and boardwalk park highlighting the natural beauty of marsh land. Not only will visitors come to walk along the marshes but a boat ramp will provide access to the lake and the Gulf. Along the boardwalk, interpretive stations will display information highlighting the history and legacy of Bangs lake and the surrounding marshes. The area will also feature a watercraft outpost to rent kayaks, canoes, and paddle boards. Visitors are just a short ride to the Gulf and can explore the surrounding lake. By placing a park along Bangs lake in a highly industrialized area, the marsh land within the park can be preserved and serve to further the beautification of the surrounding community.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1777	3/20/2014	Gulf Park Estates Fishing Pier Expansion	This project will renovate the existing fishing pier, while expanding the boat launches to accommodate a wider range of vessels. A park area will house organized parking, boardwalks, lighting improvements, landscaping, and amenities such as restrooms and fish cleaning station. The current pier is located along the Gulf outside of Biloxi Bay. This area is optimal for fishing and recreation activities. the expansion of the current fishing pier along with the creation of additional amenities will increase and enhance the Gulf Park estates community quality of life, provide additional access to the natural resources along the Gulf, and enhance overall recreational experiences. Within the area surrounding the fishing pier, additional shoreline stabilization and riprap, will replace existing water edge treatments. The goal of this project is to increase recreational opportunities available to the adjacent communities and allow improved access to natural resources.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes		No		$ -	$ -	
	Research and Education	1787	3/21/2014	Jackson County Scenic Water Trail, North Trailhead	This trailhead project will consist of a trail head with public boating access, walking trail, heritage museum and outpost. The Carter Lake Fishing Outpost will restore Carter Lake and provide recreational fishing near the Northern Trailhead. The Pascagoula Water Trail Cultural and Research Center will create an interactive culture and science center. The cultural center will focus on the native American culture for which the region derives its name and the science center will highlight conservation effects of natural wildlife mainly the efforts of the Pascagoula Wildlife Management Area. This center will serve as the primary information center for the entire trail. The North Trailhead Walking Trails will consist of walking trails adjacent to the river trail and Research center. This provides visitors not going on the water trail a small glimpse into the natural beauty of the Pascagoula River. North Trailhead Water Craft Outfit will develop an extension service that provides kayak, canoe, and other watercraft rentals to visitors. North Trailhead Boat Launch will create a boat ramp from which visitors to the Northern Trailhead can start down the Water Trail. Pascagoula River Scenic Water Trail Campground will create a campground along the water trail open to both tents and RVs, extending the stay of visitors to the area. Old Americas Road and Cedar Creek will be improved from the existing 2-lane road to a 3-lane to handle increased traffic volume to the North Trailhead. Pascagoula River Trail Road will be constructed as a new road tying Cedar Creek to the North Trailhead.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes		Yes		$ -	$ -	

	Research and Education	1798	4/3/2014	Mississippi Native American Heritage Program	The Ohr-O'Keefe Museum of Art sits on a four-acre stretch of the Mississippi Gulf Coast contiguous to the Mississippi Sound that archeological studies show once was inhabited by American Indian tribes. A central focus of the Ohr-Oâ€™Keefe Museum and an important part of the American Indian culture, dating from pre-historic times to the contemporary tribes of Mississippi, is pottery. The Museum proposes annual summer programming, to present cultural, educational and arts programming about not only the art and pottery of the Mississippi tribes, but also their customs and traditions, thereby enabling local and out-of-town Museum visitors of all ages to discover and explore the practices and contributions of past and present Mississippi Native Americans. Development of these programs will involve consultation with Mississippi tribal representatives, the Mississippi Department of Archives and History, the Mississippi Department of Marine Resources, and the National Museum of the American Indian in Washington D.C. The program, which will show a continuous flow of pottery tradition and culture on the Gulf Coast linking the Museum with Mississippi Native American Heritage, will include: -**S**eminars for the investigation, discussion and understanding of issues facing native communities in Mississippi that will provide a statewide forum for discussion, study and civic engagement of historical and contemporary topics of concern and interest to Native peoples and the general public -**D**emonstrations, lectures, workshops, and films that will highlight both traditional and contemporary Native American arts and artisans -**A**fter school and summer youth programs teaching Mississippi American Indian crafts and lore to children in a local venue -**N**ature tourism relating to nearby Deer Island sites to tell the story of Mississippi American Indiansâ€™ tribal art and way of life. Not only is Deer Island home to various eco-systems, but also it is home to Native American shell-middens, pottery shards and firing pits. -Traditional and contemporary art objects from Mississippi tribes will be professionally exhibited and interpreted in a Museum gallery -**P**rofessional development opportunities for teachers through workshops that span a range of topics and enable teachers to discover analytical approaches to connect the museum's collections and content with classroom teaching strategies will be held at the museum for educators in all subject areas	Harrison, Hancock	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	1812	4/25/2014	Economics and The Gulf Coastal States	The Objective is to collect economical data for the Gulf Coast fishermen, Anglers, processors, charter for hire and businesses that rely on our Nations marine resource to provide food and jobs for our Nation. This project will attempt to capture the true value of our Gulf of Mexico States marine resources and seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the products harvested throughout the entire seafood supply chain. We have never collect the true value to regional businesses benefitting from Gulf seafood. In most surveys they only show the x-vessel price. We will do a literature review to make sure we have included all value from the fish to the plate and all the jobs that depend on our Marine resource and all revenue that our nation receives. One example is Menhaden is used for making oil, fertilizer, dog and cat food. The oil is used as the primary ingredient in WD forty. This example is to show how the value chain comes into play and the many jobs that are created through the value chain. The outcome is to have a social and economical survey that will help capture the true value of the commercial seafood industry to the Nation as a whole. We will also provide the other businesses that depend on the seafood from the Gulf of Mexico to make their living. This data has never been collected before. If a Disaster should strike again we will have the true value and as an extra bonus of this proposal. Our science center will have the information and so will our fishery management councils that use this type of information in their management plans.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	No	Yes		Yes		$ 5,000,000.00	$ -		
	Research and Education	1814	5/6/2014	Gulf Coast Reef Fish reproduction with Fish Management	This project will help reproduce the fish that were killed by the oil spill. The Gulf of Mexico has a management tool called ITQ. The commercial Industry holds quota shares of Reef fish that can be leased, fished or sold. I have contacted some of the shareholders that are willing to lease some of their quota shares so that the fish can remain in the water to reproduce for the future. This will benefit the resource by allowing the fish to stay in the water and reproduce for the future. This reproduction will help restore the resource that was made sick by the oil spill and died. This project will not only help restore but will help give back to both the recreational fishers and commercial fishers as well as the consumers of this resource by allowing the fish to remain in the water and reproduce. This is a project that will do exactly what BP said they would do and that is to restore the living marine resource to it condition before the oil spill. This project will hep keep our coastal communities that depend on our living marine resource as a source of income for their business 's strong.	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes		$ 8,000,000.00	$ -		
	Research and Education	1815	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase I - Roadscape Assessments	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560-square-mile (11,238,400-acres) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Program Work Area Map). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase I assessments identify and characterize the location, features, conditions, maintenance regimes, previous projects, natural resources, and ecosystem impacts data for the work area unpaved road crossings, borrow pits, and crossing zone invasive species. The intensive data collection, analysis, and prioritization conducted in this phase establish the technical baseline for site treatment decision making, implementing sustainable projects, measuring improvements, and facilitating future requirements. The assessment process conducts a NEPA programmatic environmental assessment; integrates previous projects" lessons learned; builds baseline resource datasets; inventories county roadscape maintenance processes and resources; collects and analyzes site-specific field data; and scores, ranks, and prioritizes sites for treatment. It is assumed that during Program Years 1 and 2 field surveys would be conducted at an estimated 2,500 unpaved road crossings and 200 borrow pits. A discussion of Phase I is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 2,343,000.00	$ -		

	Research and Education	1816	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase II - Roadscape Prescriptions	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase II employs the findings from Phase I to develop prescriptions for selected high-priority unpaved road crossing and borrow pit sites, and an overarching treatment plan for crossing zone invasive species. A high-priority site is one identified as having a high potential for environmental impact and a high comparative ranking among the sites assessed for treatment. This phase determines the types of changes that could take place at high-priority roadscape sites. The prescriptions phase is a pivotal interim step between site assessment and project treatment that provides planners, engineers, and practitioners with information critical to minimizing project failures, maximizing the effectiveness and treatment extent of available funds, and facilitating the implementation of sustainable, long-term solutions. Phase II can only be conducted after completion of Phase I components. For Program Years 2 through 5, approximately 80 crossing and 40 borrow pit site prescriptions would be developed. A discussion of Phase II is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 995,000.00	$ -	
	Research and Education	1817	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase III - Roadscape Treatments	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase III implements on-the-ground roadscape treatment projects that produce the desired measurable improvements identified in Phase I and conceptualized in Phase II. Projects are designed and implemented applying prescription alternatives to high-priority unpaved road crossings, borrow pits, and crossing zone invasive species. Crossing and borrow pit projects would include contracted project designs, engineering, and construction and support of county administered projects through technical consultation and site inspection services. Local construction companies would be used to support project design and implementation. As applicable, project activity permitting would be conducted with state and federal regulatory agencies during project design phases. For Program Years 3 through 5 there would be construction projects for an estimated 15 crossings and 10 borrow pits and invasive species treatments at an estimated 750 crossing zones. A discussion of Phase III is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes	80	No		$ 7,913,000.00	$ -	
	Research and Education	1818	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase IV - Roadscape Monitoring	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase IV provides comprehensive monitoring of crossings, borrow pits, and affected waterway pre- and post-treatment to document conditions and identify changes. Collection methodologies and protocols for each monitoring activity have been developed to provide standards, procedures, criteria, and indicators for collecting information. For Program Years 3 through 5, crossing baseline monitoring would be conducted biannually at 200 selected high-priority sites, while pre- and post-project construction monitoring would be conducted at 15 sites, sediment delivery monitoring at 10 sites, and aquatic ecosystem monitoring at 15 project sites. Borrow pits monitoring would include biannual baseline monitoring at 40 high-priority pits and annual project and aquatic ecosystem monitoring at 10 project sites. An estimated 75 crossing zone invasive species sites would be inspected annually. A discussion of Phase IV is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 346,000.00	$ -	
	Research and Education	1819	10/16/2014	A Program to Assess and Treat Roadscape Sources of Aquatic Ecosystem Degradation in Coastal Mississippi, Alabama, and Louisiana: Phase V - Information Dissemination	The proposed five-year program would implement the specially designed Roadscape Watershed Recovery Program (RWRP) to assess, develop prescriptions, treat, monitor, and disseminate information for roadscape unpaved road crossing and borrow pit assets in the approximately 17,560 square-mile (11,238,400 acre) Pearl, Pascagoula, Mobile-Tombigbee, and Alabama River Basins within Mississippi, Alabama, and Louisiana (see Attachment Proposal). The primary resource areas addressed by the RWRP include water quality, aquatic habitats, rare and imperiled aquatic species, invasive species, and stormwater runoff. The RWRP was developed to provide roadscape maintenance and resource management end-users with ground-truthed information, methodologies and practices to improve decision making that result in the on-the-ground implementation of sustainable, long-term solutions. The program is divided into five phases that include assessments, prescriptions, treatments, monitoring, and information dissemination. Reductions in roadscape-induced sedimentation, culvert crossing biological barriers, and crossing zone invasive species would result in measurable water quality and aquatic habitat improvements in river basin watersheds and coastal ecosystems. Roadscape issues, impacts, the program process, costs, and anticipated benefits are discussed in the Attachment Proposal. Phase V provides the means to make the extensive amount of information developed by the program available to the public and to resource stewards responsible for implementing and/or maintaining roadscape treatment projects. The purpose is to: 1) increase citizen awareness of water resource benefits, impacts, and restoration activities and promote their active participation in watershed stewardship; 2) educate practitioners in roadscape asset maintenance and reclamation; and 3) promote partnerships among agencies, resource managers, and other organizations to address watershed-based restoration and conservation needs. The South Mississippi Watershed Recovery Initiative program website would be deployed in Program Year 1, the roadscape manual would be developed in Program Year 4, and two webinars per year would be conducted during Program Years 4 and 5 for the proposed five-year funding period. Phase V is not constrained to the completion of any previous phase and can operate as needed in concurrence with the other phases. A discussion of Phase V is presented in the Attachment Proposal.	Hancock, Harrison, Jackson, 32 other additional counties	Yes	No	No	No	No	Yes	Yes		No		$ 235,000.00	$ -	

	Research and Education	1839	5/14/2014	Modernization of GCRLâ€™s research infrastructure on the Halstead Campus	GCRL physical plant is not modern and so is energy inefficient, has inadequate backup generator power, and supports several buildings with modern-day uses very different from the original design intentions. Of particular importance is to reduce the energy footprint for the campus. In addition, the GCRL boat basin has not been renovated since prior to Hurricane Katrina. The following projects would substantially modernize the Halstead Campus. 1. Upgrade of electrical, air conditioning, and generator capacity for Caylor. Much of the lower level wiring is aging prematurely due to submersion in saltwater during Katrina. Generator capacity is gravely inadequate. The air conditioning and heating units should be replaced with modern energy-efficient power plants. 2. Upgrade of electrical, air conditioning, and generator capacity for the Research Building. Much of the lower level wiring is aging prematurely due to submersion in saltwater during Katrina. Generator capacity is gravely inadequate. The air conditioning and heating units should be replaced with modern energy-efficient power plants. 3. The Directorâ€™s house, originally a home, now serves as an administrative unit. Efficient use of the facility requires renovation to e.g., remove the kitchen and replace it with office space. Movement of GCRL administration in total to this facility would open up badly needed office space for faculty and graduate students in the Oceanography Building. 4. The old toxicology building will be replaced by a new building sited on the Cedar Point Campus. Renovation of the old building to convert it into a modern laboratory and office facility will permit expansion of the Fisheries and Ecosystems Research groups. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $1.920 million Annual Operation & Maintenance Cost (# years): GCRL supports full maintenance, utilities, and custodial services for these buildings. GCRL anticipates that the renovations will reduce, not increase, these costs resulting in a long-term cost savings to GCRL. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects the renovations to support a wide range of science programs aimed at fisheries, coastal restoration, ecosystem and landscape biology, and marine diseases, among others. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit GCRL to upgrade its physical plant and reduce its cost of operation. The facilities support a wide range of research programs affecting local, regional, and national economics by providing the location	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 1.92	$ -	
	Research and Education	1840	5/14/2014	Redesign of GCRL Halstead Campus entrance, vehicular routes, and boat access	GCRLâ€™s main entrance is a road-based easement across a neighboring piece of property. Due to sealevel rise, this entrance is increasingly flooded preventing employees from attending work on some days and risking the entrapment of employees and students already on site. In addition, (1) a number of areas of severe erosion endanger the property and adjacent marshes. In addition, boat-ramp access by local boaters, provided under an MOU signed with the City of Ocean Springs, generates congestion without providing a positive experience of the visitor. Growth of the MEC program has saturated available student parking and resulted in high traffic use on old, poorly marked roadways. The main entrance, vehicular routes, and parking should be fully redesigned. This will entail the following steps. 1. Purchase of the adjoining property; 2. Redesign of Halstead vehicular traffic by moving the main entrance to higher ground and re-orienting roadways consistent with the new entrance; 3. Establishment of a new boat launch and parking facility near the present entrance; 4. Development of a landscaping plan including a swale to capture storm runoff and erosional materials along the near-shoreface from the new ramp to the boat basin; 5. Addition of trees to improve wind management; and 6. Construction of additional parking for students, staff, and faculty in the area where the present entrance road divides towards the boat basin. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $735,000 Annual Operation & Maintenance Cost (# years): GCRL expects little additional long-term costs above present-day upkeep of the present entrance, as landscaping will be low maintenance trees and shrubs; mowing the grass on the new property will be the only additional maintenance item. Ocean Springs has obligated funds to maintain garbage pickup and to provide police security in the public access areas. How will this leverage with other RESTORE priority areas or non-RESTORE funds? GCRL expects the renovations to support a wide range of science programs aimed at fisheries, coastal restoration, ecosystem and landscape biology, and marine diseases, among others, as well as the middle to high school and undergraduate programs of the MEC and graduate level courses taught by GCRL faculty. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce	Jackson	Yes	Yes	No	No	No	Yes	Yes	100	Yes		$ 735,000.00	$ -	
	Research and Education	1841	5/14/2014	Design and construction of overnight lodging and expanded dining capacity supporting the Marine Education Center	GCRL offers a range of over-night and short-term lodging for visiting scientists, and visiting teachers and students participating in the various programs offered by the Marine Education Center. In 2013, the availability of overnight lodging was a direct determinant of the number of participants in the Marine Education Center programs, as all available beds were filled. An ongoing economic feasibility study shows the potential for the MEC to increase its current participant numbers to double its existing capacity with the addition of appropriate lodging on the Halstead Campus. The additional of lodging at Halstead will support continued expansion of our summer field camps and teaching programs and will also provide additional capacity for conferencing and retreat programs for small science professional and academic groups. Additionally, several of the MECâ€™s educational partners have indicated a similar need for appropriate housing compatible with their program audiences. These partners include The National Park Service, The Grand Bay National Estuarine Research Reserve, the Pascagoula River Audubon Center, the Ocean Springs Chamber of Commerce, the Mary C. Oâ€™Keefe Cultural Center and the Walter Anderson Museum of Art. Partnering with these organizations provides additional housing markets and professional program growth opportunities. The construction project proposed will at accommodations for 80. The GCRL dining facility is equivalently taxed. Maximum capacity has been reached on a number of occasions in 2013. Expansion of the MEC program will require an expanded ability to feed participants commensurate with the expanded lodging capability on the Halstead Campus. Location (City, County): Ocean Springs, Jackson, GCRL Halstead Campus Infrastructure cost (# years): $3.345 million Annual Operation & Maintenance Cost (# years): GCRL manages its lodging on a cost recovery basis. Day rates cover custodial, power, water, sewer, maintenance/upkeep, and bedding/furniture replacement. No additional financial resources will be required to support the expanded lodging capacity. How will this leverage with other RESTORE priority areas or non-RESTORE funds?: GCRL expects that lodging will provide a vehicle to dramatically expand (a) our Marine Education program, (b) the use of our facility to accommodate professional groups participating in retreats and think tank programs, and (c) expanded outreach partnerships with e.g., The National Park Service, The Grand Bay National Estuarine Research Reserve, and the Pascagoula River Audubon Center. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): The project will permit USM to dramatically expand its Marine Education, outreach, and professional enhancement programs. These activities will expand the view of Ocean Springs and surrounds as a location for	Jackson	Yes	No	No	No	Yes	No	Yes	100	No		$ 3.35	$ -	

	Research and Education	1842	5/14/2014	Marine shrimp farming industry for Mississippi	Over ninety percent of all shrimp consumed in the United States is imported. Our current seafood deficit exceeds $10B annually. The focus of the Marine Shrimp Farming Industry for Mississippi program (MSFIM) will be the demonstration and transfer of closed system, biosecure production technology for marine shrimp to develop a marine shrimp farming industry in coastal Mississippi. Closed, biosecure shrimp aquaculture systems undergo little or no water exchange, which prevents disease transfer, prevents pollution discharge, and allows for production of marine species at locations which are not adjacent to the ocean, thereby protecting sensitive coastal land and creating unique economic opportunities. This technology has been in development for approximately 10 years at various research institutions, including the University of Southern Mississippiâ€™s Gulf Coast Research Laboratory (GCRL). Through diligent research efforts the technology has reached a point where the private industry can adopt these techniques and put them to use. The goals of the program are, 1.To demonstrate the use of sustainable, biosecure shrimp culture technology in the prototype commercial facility at GCRL 2.To engage and educate potential and existing shrimp fishers, seafood retailers, consumers, and members of Gulf of Mexico coastal communities with regard to sustainable marine shrimp aquaculture. 3.To provide training and extension assistance to individuals interested in undertaking the culture of marine shrimp profitably and sustainably in south Mississippi Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $500,000 (1 year) Annual Operation & Maintenance Cost (# years): $1 million per year (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of a Marine Shrimp Farming Industry for Mississippi addresses economic and workforce development. The facilities for demonstration of the technology are already available and require only slight modifications. The methodology is well known and the expertise for technology transfer is immediately available at GCRL. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): Construction will be minimal but the development of a marine shrimp farming industry in Mississippi will yield substantial job creation and economic opportunities. â€¦	Jackson	Yes	Yes	No	No	No	Yes	Yes	10	Yes		$ 5.50	$ -	
	Research and Education	1843	5/14/2014	Development of an Aquacultured bait industry for Mississippi	The project will provide research, development, and technology transfer to develop an aquaculture-based bait industry for south Mississippi. Many recreational fishermen were severely affected by a combination of Hurricane Katrina, the BP oil spill, and increased fuel costs. Not only have many for-hire owners and operators lost their livelihoods, but so to have deck hands and live bait suppliers. To help alleviate these seafood related job losses, we propose to develop of an aquaculture-based bait industry in south Mississippi. We will do this through a three-stage approach, 1) research and development, (2) technology transfer through training, and (3) onsite extension assistance. Four species are targeted, each at a different point in the technical development. Bull minnows are the furthest along and stages 2 and 3 can be implemented immediately. Gulf white shrimp, blue crabs, and croaker all need some technology development before implementation of stages 2 and 3. Training of local commercial fisherman will be accomplished through the design and construction of demonstration systems for the rearing of bull minnows in ponds at the Lyman Fish hatchery, and bait shrimp, crabs and croaker at the Cochran Marine Aquaculture Center at the Gulf Coast Research Lab. Training will include: 1) design and function of ponds and closed-system components (how to build a system), 2) importance of appropriate filtration and a rudimentary understanding of the nitrification process, 3) water quality parameters and how to measure them, 4) â€œeneed to knowâ€ facts about the biology of the species being cultured, and 5) trouble-shooting the system. Certificates of Completion will be awarded to program participants that complete the training course(s). In addition to the certificates awarded, a dedicated technical support person will work with interested individuals to help them modify and upgrade their facilities. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County). Infrastructure cost (# years): $1 million (2 yrs) Annual Operation & Maintenance Cost (# years): $1 million (5 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? Development of an aquacultured Bait industry for Mississippi addresses economic development. The facilities for implementation of the program are already available and require only slight modifications to the ponds at the Lyman Fish Hatchery and the Cochran Marine Aquaculture Center. Once the program is fully implemented there will be a sustainable industry developed. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce	Jackson	Yes	Yes	No	No	Yes	No	Yes	50	Yes		$ 2.00	$ -	
	Research and Education	1844	5/22/2014	Gulf of Mexico Marine Stock Enhancement and Restoration Consortium	Brief description of activities: We will develop a multi-state consortium to address scientific, hatchery-based restoration and enhancement of economically important marine finfish species potentially impacted by ecosystem degradation including the Deep Water Horizon oil spill. Using a structure template developed through previous grants from NOAA and the Mississippi Department of Marine Resources, we will mobilize partnerships among universities, state management agencies, and private enterprise Gulf-wide to 1) develop hatchery technology and capacity for production of selected economically important species and 2) use the fish produced to test and implement strategies for achieving science-based restoration and mitigation. Disciplines ranging from reproductive biology, genetics, larval rearing, nutrition, and health management to coastal and fisheries ecology and economics will be represented and address fundamental hypothesis-driven questions relevant to the pursuit of these goals. Location (City, County): Headquartered at GCRL in Ocean Springs (Jackson County) with participants in all five Gulf states funded either by their respective states or from Federal RESTORE funds. Infrastructure cost (# years): $10 million over 5 yrs Annual Operation & Maintenance Cost (# years): $2 million per yr (10 yrs) How will this leverage with other RESTORE priority areas or non-RESTORE funds? The Mississippi component of the Gulf-wide consortium will be funded by Mississippi RESTORE funds. The component programs in each individual state will be funded by their respective stateâ€™s RESTORE funds. The complete consortium could be funded by the Federal share of the RESTORE funds. The consortium can be at least partially sustained over the long-term by user fees levied as part of commercial and recreational fishing licenses and taxes imposed on industry for use of public resources such as tidelands and waterways consistent with the Public Trust Doctrine. Information relevant to Economic Development (e.g., new construction, new employment opportunities, workforce development and training, etc.): New hatchery capacity will require construction and materials. Active hatcheries, research programs, and enhancement activities will add jobs to the economy and facilitate the development of a skilled workforce.	Jackson	Yes	Yes	No	No	No	Yes	Yes	40	Yes		$ 30,000,000.00	$ -	
	Research and Education	1865	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Bird Estuary and Nature Trail	By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plants and ultimately water quality. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	80	Yes		$ 5,720,500.00	$ -	
	Research and Education	1866	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Marine Education and Recreation Restoration	This project consist of a marine education center, a 9 mile kayak route and a 1 mile hiking and biking trail that will provide marine education and restore nature recreation. Identifies cypress, tupelo gum, fresh water, brackish water, saline marsh, environment through education, information and monitoring stations at strategic locations along the 9 mile route. In conclusion this project stimulates public interest and support as well as education and participation in recreation information, seafood participation and water quality.	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	40	Yes		$ 1,370,500.00	$ -	

	Research and Education	1867	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring conservation and recovery are the components of this project a byproduct that makes beneficial use of trapped sediment also allows public access. By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plans and ultimately water quality. By hardening the Bay of Saint Louis with oyster and clams water quality is improved, sea grasses will be reintroduced and erosion as seen in slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. This project consist of multiple activities that stimulate public interest and support as well as education and participation in recreation restoration, seafood production and water quality. In conclusion, the project restores streams and drainage to its original state with the addition of sediment traps which makes beneficial use of urbanized run off. The project also has build in monitoring stations that benefit growth and the City supports and embraces this project..	Hancock	Yes	Yes	No	Yes	Yes	Yes	Yes	80	Yes		$ 9,519,500.00	$ -		
	Research and Education	1870	6/11/2014	Billboards informing of invasives	Most people don't read. They think that lovely strange tree that turns such beautiful colors in the fall is some blessing they have received. Billboards with pictures of tallow trees and cogon grass would FORCE those who don't read to reccognize the invasives.	Harrison, Jackson, Hancock	Yes	No	No	No	No	No	No		No		$ 800,000.00	$ -		
	Research and Education	1876	8/1/2014	The Economic Impact of Alternative Numeric Nutrient Criteria on Mississippi Communities	*Project Partner - Mississippi Farm Bureau Federation* Research Goal The overall goal of this research is to better understand how Alternative Numeric Nutrient Criteria (NNC) can impact Mississippi (MS) communities. We include agriculture, urban storm water, septic, municipal wastewater, industrial and state resource agencies as the affected sectors in these communities. For each sector, the cost of adapting to a newly proposed NNC will be estimated. For example, we propose to estimate the cost of such standards upon the agricultural sector including, but not limited to, row crops, specialty crops, poultry, and cattle. Total costs will then be aggregated across sectors and a regional and state level economic impact analyses will follow. The NNC to be examined in this study have been proposed by the MS Department of Environmental Quality (MDEQ) under the Environmental Protection Agency (EPA) directives. Where possible, we primarily follow the methodology for estimating costs per sector under uncertainty as described by the Florida Water Quality Coalitionâ€™s 2010 study. Research Study Area The State of Mississippi (48,434 mi2) has nine major river basins with approximately 86,000 miles of streams draining directly into the Mississippi Sound and the Gulf of Mexico, the Mississippi River and the Tombigbee River (Figure 1).The basins of the Pearl and Pascagoula Rivers and the Coastal Streams represent 41% of the Stateâ€™s area and empty directly into the Gulf of Mexico off the coast of Mississippi (Figure 1). Livestock production is the most important agricultural activity in these areas. Nutrient and bacteria from animal wastes often get into the streams resulting in different water quality problems along the inland water bodies and the coastal waters. This entire area has been ranked nationwide in the top ten and top twenty areas in need of protecting water quality from manure nutrient contaminants (Kellogg, 2000). Mississippi State University Research Team James Barnes (PI)	All MS Counties	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 739,478.00	$ -		
	Research and Education	2067	10/21/2011	Addressing Marine Debris to Expedite Recovery along the Gulf Coast	The significant and long-term negative impacts along the Gulf Coast resulting from the Deepwater Horizon oil spill will require a suite of restoration projects. In addition to physical marsh restoration and other activities to restore resources, the entire Gulf region will significantly benefit from a targeted, sustained outreach and education campaign to improve the health of impacted resources. This type of restoration project, conducted as part of NRDA in the past, will reduce future injury to protected species - both marine mammals and sea turtles - and their habitats through the reduction of existing marine debris as well as the prevention of future introduction of hazards. By preventing preventable future injuries, this project will enhance the capacity for species and habitat recovery and the time of impact to recovery will be shortened. Enhancing nearshore and shoreline habitats through reducing impacts of marine debris will aid in the long-term, sustainable recovery of the Gulf Coast at an accelerated rate. Specifically, this project will effectively coordinate and execute a two-year, intense outreach and education campaign that will result in lasting changes after the project is complete. Hosted at the NOAA Disaster Response Center in Mobile, AL, and coordinated as a NOAA partnership project with the NOAA Marine Debris Program as lead coordinator, this project will engage all five states, maintain and improve partnerships with state and local organizations, and strengthen public engagement across the Gulf. This project t is specifically targeted to involve and educate Gulf Coast communities how marine mammals, sea turtles, and habitat will all directly benefit from debris prevention and removal. The project will also look to identify targeted areas for debris removal that will have the most impact to improve the ecological health of the Gulf. Key contacts associated with this project already have strong professional working relationships across th e region. As has been successfully demonstrated in previous projects in the Gulf of Mexico, Sea Grant extension agents have a unique capacity to strengthen community involvement - including select communities where English is not the first language - and broaden awareness through effective beach clean-ups, fish rodeos, etc. This project will incorporate powerful Public Service Announcements, print materials, and technology to effectively raise the awareness across the Gulf States that a sustained outreach campaign focused on debris prevention and removal will benefit livelihoods in the entire region in both the short and long-term.	Gulf of Mexico	Yes	No	No	No	No	Yes	No		No	Yes	$ 10,000,000.00	$ -		
	Research and Education	2073	7/8/2014	Small and Medium Business Entrepreneurship Training	Gulf Coast Business Partners will conduct 12 weeks of basic business training to small business along the MS Gulf Coast. The training will equip the small business person with the basic needs to sustain and grow their business. In addition to training participants will be matched will be matched with mentors. Gulf Coast Business Partners believes that strong partnership will encourage four strategic activities.. Training, Mentoring, Advocacy and Access to Capital...in order to walk alongside small and medium enterprise owners. Overemphasizing one activity or neglecting another makes for an unbalanced approach to sustaining and growth of business development.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No	No		Yes		$ -	$ -		
	Research and Education	2074	7/14/2014	Oyster Reef Structural Complexity	Summary attached.	Hancock, Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ 438,035.00	$ -		
	Research and Education	2104	4/1/2015	Conservation Demonstration Working Farm	Thanks to numerous conservation innovation practices, as stewards of the land we are doing a much better job than in the past. As urban sprawl and demands for our natural resources continues to increase, we need a forum to demonstrate these new conservation advances to the public. A working demonstration farm would not only benefit consumers of natural resources but also the producers of those resources and others. â€œThe Farmâ€ would be utilized in multiple ways to exhibit conservation practices. Farmers would be shown cutting edge farming practices that would benefit the environment while at the same time benefitting their bottom line. Students will take advantage of the facility to better understand the native habitats and the methods that are being used to handle the growing use of them today. Schools will be able to expose children to where the food and fiber that they consume daily comes from and what it takes to get those products to them. Researchers will continue to explore new mechanisms that will aid in conservation. State and County officials can use the site to better understand the pleas of those who they serve. These are just a few of the services that â€œThe Farmâ€ could be of use to the public in its understanding of conservation. The CMSWCP would like the opportunity to establish a â€œConservation Demonstration Farmâ€ The land would be acquired and the necessary infrastructure established. The locations would ideally consist of varied topography within a watershed basin close to a major waterways.	Harrison, Hancock, Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ 5,000,000.00	$ -		

	Research and Education	2117	9/18/2014	Park Restoration and Expansion Initiative	Currently Pat Harrison Waterway district owns and operates eight parks. These parks provide camping, cabins, and recreational facilities for both locals and tourist to enjoy. As part of the Pascagoula River Basin Enhancement Program a renewed focus will be taken on maintenance and restoration of these parks to enhance recreational opportunities for the community. The goal of the park restoration and expansion initiative is to reach out to the local communities and civic groups to identify restoration needs of the parks as well as looking into the expansion of existing facilities based on attendance and local interest. By providing new pavilions, boat ramps, updating cabins, adding watercraft rental outposts, educational trails and interpretive stations, the existing parks can be improved to increase tourism and improve quality of life for the community. As part of the park restoration and expansion initiative, community outreach is imperative. Allowing the community to identify needs and concerns ensures the intended recipients of these improvements are satisfied. Event programming and outreach to increase tourism will be initiated in parallel with restoration efforts as well as updating the multi-media facilitation of park information.	Stone, Jackson, Pearl River, Perry, Harrison, George	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	2118	9/22/2014	Pascagoula River Basin Enhancement Program-Pascagoula River Water Trail	The Pascagoula River Basin Enhancement Program has the opportunity to capitalize on the vast ecological treasures that the Pascagoula River Provides. The Pascagoula River Water Trail Project establishes the national designation of this water system in the National Water Trails System. This identification serves to bring existing and newly identified water trails together into one cohesive national network of water trails. The objective of the National Water Trail System is established as protecting and restoring America's Rivers, shorelines, and waterways and conserve natural areas along waterways. Also serves to increase access to outdoor recreation on shorelines and waterways. Using the established major tributaries to the Pascagoula, the Pascagoula Water Trail seeks to unite the Pat Harrison Waterway District with a cohesive goal of recreational access and restoration of the riverine systems. The first phase would establish the Leaf, Chickasawhay, and Pascagoula Rivers as water trails. The second phase would expand to include other tributaries in areas that community outreach and support is strong. A key objective of the water trail is to develop trail-heads at strategic locations along the trail. These trail-heads will be existing park facilities that are adjacent to the water trail like Dunn's Falls and new facilities that will include water-sports outposts and convenience stores. Part of the development of the water trail will be the establishment of safe watercraft launches, campgrounds, walking trails, fishing outposts, and educational boardwalks. There is an opportunity to develop a cultural heritage museum at one of the trail-heads that would increase the tourism traffic to the trail. Additional infrastructure to connect the new facilities to existing roadways will be built as well as improvements to existing infrastructure. The goal of the water trail is to increase the quality of life in adjacent communities, increase the ecotourism appeal of the region, improve existing facilities, extend recreational opportunities, and highlight the historical significance of this unimpeded water system. Each water trail while designated nationally is locally managed. With community support the Pat Harrison Waterway District, Pascagoula Water Trail will provide recreational opportunities, educate the public about the value of water resources and cultural heritage, provide opportunity for conservation of waterway health, provide the public with accessible and understandable water trial information, maintain the routine and long term investments on the water trail, and plan for the	George, Perry, Forrest, Jackson, Stone	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	2119	9/22/2014	Pascagoula River Basin Enhancement Program-Pascagoula River Basin Forest Preserves Program	Of the counties within the Pat Harrison Waterway district, an average of seventy-nine percent of the ground coverage is forestland. In order to preserve and maintain both pine and hardwood in the region, the Pascagoula River Basin Forest Preserves Program will restore pine and hardwood and provide technical and on-the-ground restoration assistance to family forest landowners interested in managing or restoring the pine and hardwood on their lands. The program will identify, protect, and manage forest habitat, recognizing that the abundance and productivity of the Pascagoula River Basin ecosystem is a product of the quantity and quality of the forest habitat. The south and central parts of Mississippi continue to face threats from the southern pin beetle on the forestry industry. As part of this program the movement and outbreaks of destructive species like the southern pine beetle will be monitored and evaluated for conservation initiatives. The goal of the Pascagoula River Basin Forest Preserves Program is the integrate landowner outreach with prescribed conservation to monitor, maintain, and restore the forest within the Pat Harrison Waterway District.	Stone, Jackson, Forrest, Perry, Harrison, George	Yes	No	No	No	No	Yes	No		Yes		$ -	$ -		
	Research and Education	2120	9/22/2014	Pascagoula River Basin Enhancement Program-Pascagoula River Riparian Buffer Maintenance Plan	This program will seek to identify, monitor, and maintain riparian buffers along the Pascagoula River and its tributaries. Also provide outreach and technical assistance to accelerate firs-time enrollment of new riparian buffer though the conservation reserve enhancement program. Riparian buffers act to partially protect streams from the impact of adjacent land uses. Buffers increase water quality in associated streams as sediment is intercepted, serve to provide habitat, and reduce bank erosion by providing bank stabilization. The Pascagoula River Basin drains much of Southeast Mississippi into Pascagoula Bay. This management program is being undertaken to ensure that past and future development does not diminish the quality of water entering Pascagoula Bay from the upstream river basin. This river basin faces excessive erosion and sedimentation, storm-water runoff from new development can impact the riverine morphology. With planning and monitoring riparian buffers will help control channel instability, head-cutting, mass slumping, and wetland degradation. Riparian buffers that exist currently and proper planning of new buffers will help mitigate future loss in water quality.	Stone, Jackson, Forrest, Perry, George	Yes	No	No	No	No	Yes	No		No		$ -	$ -		
	Research and Education	2121	9/22/2014	Pascagoula River Basin Enhancement Program-Pascagoula River Species Stewardship Program	This program will seek to establish a monitoring and planning program that will increase and maintain the habitat of species native to the Pascagoula River and its tributaries through stewardship activities. The stewardship program will focus on carrying out standard monitoring activities; implement best management practices to secure sensitive habitats and reduce human use and invasive species threats; and educate diverse audiences to increase understanding of the needs and value of the Pascagoula ecosystem. Several species native to the Pascagoula River Basin include the Gulf sturgeon and the striped bass that migrate to the river to spawn. Also found in this watershed are the Pearl darter, swallow-tailed kite, Mississippi sandhill crane, and the yellow-blotched map turtle. All of these and any other identified threatened and endangered species will be included in this stewardship program. The goal of the Pascagoula River Species Stewardship Program is to restore and protect Pascagoula River species populations, reduce identified stressors and disturbances, and restore habitat to allow higher rates of survival.	Stone, Jackson, Forret, Perry, George	Yes	No	No	Yes	No	Yes	No		Yes		$ -	$ -		

	Research and Education	2122	9/23/2014	Pascagoula River Basin Enhancement Program-Stormwater Management Initiative	Stormwater Management Initiative: Pollution and Prevention Plan This plan is intended to develop a management programs for current stormwater rehabilitation and future construction within the Pat Harrison Waterway District. The Pascagoula River and its tributaries feed a watershed that covers most of southeast Mississippi. The groundwater and surface water that feeds the riverine systems flow into Pascagoula Bay and ultimately the Gulf of Mexico. In order to best conserve and maintain the health of those who depend on this riverine system, proper stormwater and run-off monitoring is vital. The Stormwater Management Initiative will focus on the streams and urban areas that flow directly into the Pascagoula and its tributaries. The program will seek to restore streams that are highly altered including green corridors enhancing their ability to handle stormwater runoff, erosion, and sedimentation. Also, runoff will be monitored for water quality to ensure proper best practice management and construction practices are being implemented. The goal of the Stormwater Management Initiative is to directly engage local communities to the importance of best management practices as well as promote proper construction and design of future stormwater systems. There are several approaches to stormwater management to consider. Low-impact development seeks to manage runoff using a distributed approach that mimics the predevelopment hydrology instead of conveying and treating stormwater at only the end of the drainage area. Green infrastructure is an approach that uses a natural system to capture, cleanse and reduce stormwater runoff using plants, soils and microbes. And environmental site design is an approach that mimics natural systems along the whole stormwater flow path through combined applications of design principles. The objective for the environmental site design is to replicate forest or natural hydrology and water quality. With proper incentives and partnerships pre-planning for future stormwater infrastructure can help properly conserve and maintain riverine systems. The Stormwater Management Initiative will focus on non-point sources of water pollution and prepare a monitoring program that coincides with the best management practices to be developed and adopted by communities that will identify areas of water quality concern. The identified locations will be the focus of the monitoring initiative and evaluated for improvement options where applicable. With a combination of community outreach and proper planning the Stormwater Management	George, Perry, Forrest, Jackson, Stone	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	2123	9/23/2014	Pascagoula River Basin Enhancement Program-Waterfront Development Program	Pascagoula River Basin Waterfront Development Program This plan is intended to develop a management program for future waterfront development within the Pat Harrison Waterway District. A waterfront can be the most desirable location for future development. Proper planning and adopted management programs for waterfront areas are fundamental when the need to arises to ensure environmental sensitivity in an ecologically diverse region. The Pascagoula River Waterfront Development Program will establish a best practices and development method that will ensure the desired waterfront economic and job creation are responsibly achieved in a way that mitigates environmental impact. Waterfront properties and recreational development can enhance the quality of life for communities. Greenways and riverwalks become tourist host spots and can enliven a cityâ€™s economy. The Pascagoula River Basin Waterfront Development Program will maintain environmental focus while properly monitoring future development along the riverine system. The development of educational boardwalks, farmers markets, and greenways all a part of waterfront development programs will promote tourism, economic development, and expand recreational options.	Stone, Jackson, Forrest, Perry, George	Yes	No	No	Yes	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	2124	9/23/2014	Pascagoula River Basin Enhancement Program-Digital Watershed Management Model Approach	The Pascagoula River Basin is Mississippiâ€™s second largest river basin and is also the last unimpeded river system in the contiguous United State. It is approximately 164 miles long, 84 miles wide, and includes more than 15,000 miles of rivers and streams. Major rivers within the Basin include the Pascagoula, Chickasawhay, and Leaf Rivers as well as Black Creek and Red Creek. The Basin eventually drains into the Mississippi Sound/Gulf of Mexico at Pascagoula, Mississippi. The Basinâ€™s ecosystem is nationally recognized for its abundant wildlife, biological diversity, and rich cultural and historical heritage. It is an undisputed national treasure. As a prime tributary to the northern Gulf of Mexico, the water quality and biological health of the Pascagoula Basin contributes directly to the health, well-being, and quality of the Gulf. Following the BP Oil Spill and the subsequent impacts to Gulf waters, biota, and fauna; numerous initiatives have been proposed (and some initiated) to improve the ecosystem of the Gulf, specifically its inland water bodies and habitats. To this end, the Pat Harrison Water Management District envisions an initiative leading to quantification of the water quality and attributes of the Pascagoula River Basin, over which Pat Harrison exercises statutory oversight. This initiative addresses a need for developing a comprehensive, total watershed approach to water resources management throughout the Pascagoula Basin, including the major contributors the Pascagoula, Leaf, and Chickasawhay Rivers, also any minor contributing streams and creeks. The approach would facilitate collaborative relationships with other parties (local, state, and federal, as well as non-governmental organizations) with shared interests in the use, quality, and management of the waters of the Pascagoula Basin. The primary tool at the core of such a total watershed approach is a comprehensive, digital land base model of the Basin. This model will consist of a digital framework of data layers, the chief of which are ortho-imagery, topography, and hydrography â€“ all at very high resolution. These enable the most advanced modeling and assessment possible. Essentially, this tool would serve as the foundation for all future studies and assessments of the Basin related to water quality, ecosystem and environmental health, infrastructure and economic development, or otherwise. The specific area proposed for development of the initial model is the combined watersheds of the Chickasawhay and Leaf Rivers, continuing to their confluence forming the Pascagoula River in George County. Overall, this combined watershed comprises nearly 9,000 square miles. The goal of the digital watershed management model is to provide a tool that can be utilized by both public and private end users to serve a host of functions that ultimately promote the mutual interests and benefits of the Pascagoula Basin and Northern Gulf of Mexico. Specifically, the model will facilitate evaluating and establishing policy guidance regarding such issues as:	Stone, Jackson, Pearl River, Forrest, Perry, George	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -		
	Research and Education	2126	9/23/2014	Pascagoula River Basin Enhancement Program-Dam Safety Best Management Initiative	Pascagoula River Basin Dam Safety Best Management Initiative The Pascagoula River is the largest by volume unimpeded river in the contiguous United States. However, there are several dams that were set in pace to create reservoirs that help control flooding in the region along tributaries and streams that feed into the Pascagoula River. These dams are largely managed by the Pat Harrison Waterway District but several are managed by private landowners. The Pascagoula River Basin Dam Safety Best Management Initiative will ensure a cohesive inspection and monitoring plan is set in place. Through best management practices and coordination with private landowners, the initiative seeks to mitigate risk of dam related emergencies within the region. The formal guidelines will ensure dam owners coordinate with emergency management authorities to facilitate the development of plans that are comprehensive and consistent. As part of the comprehensive planning in the region, a second phase including analysis of dams considered at risk or demonstrating structural deficiencies will be completed to further mitigate dam failure threats.	Stone, Mobile, Jackson, Pearl River, Forrest, Perry, George	Yes	No	No	No	No	Yes	Yes		Yes		$ -	$ -		

	Research and Education	2134	10/1/2014	I-110 Corridor Restoration & Enhancement	The City of Biloxi proposes to implement its 1980s master plan for utilizing the corridor of public land located under Interstate 110, which runs north-south from the Back Bay of Biloxi to the Mississippi Sound. The original master plan, developed with considerable citizen input, is being updated to include storm water management improvements and acquisition/restoration of a wetlands area adjacent to the I-110 Corridor, north of Division Street. Storm water management improvements will include installation of BMPs along the corridor to filter nonpoint source pollutants from the interstate's storm water that drains unchecked from the elevated roadway. The BMPs will have an educational component, identifying their function in improving water quality through all-weather signage located along the walking paths that currently exist (and which are to be enhanced with additional lighting and drainage). Public safety and recreational amenity improvements will expand use of this area by residents and tourists. The south end of the corridor is located immediately west of the minor league baseball stadium being built and the Beau Rivage Casino Resort. The north end includes an under-utilized boat ramp, basketball and tennis courts, all of which are in need of improvements and lighting. Acquisition and restoration of the wetlands area north of Division Street will include removal of invasive, nonnative plant species as well as accumulated debris. Sediment will removed and appropriate wetlands plant species will be installed to restore the natural functions of the wetlands area that is tidally-influenced by the Back Bay of Biloxi. The master plan will be scanned and uploaded as an attachment to this project proposal.	Harrison	Yes	No	No	Yes	No	Yes	Yes	20	Yes	storm wat	$ 6,000,000.00	$ -	
	Research and Education	2135	10/1/2014	Biloxi Peninsula Shoreline Stabilization and Public Access Improvements	The City of Biloxi proposes to implement a variety of shoreline stabilization measures along the Biloxi Peninsula in areas owned and/or managed by the City to control erosion, adapt to sea-level rise and improve public safety and access. Shoreline improvements will include stormwater management BMPs accompanied by all-weather educational signage to identify short- and long-term public benefits of a properly-managed waterfront. Improvements will include removal of nonnative, invasive plants species; installation of appropriate native plant species to support shoreline stabilization and restoration of shoreline habitats; removal of concrete, riprap, abandoned/obsolete infrastructure and miscellaneous debris; and stormwater management improvements to improve water quality. Public safety and access improvements will include provision of lighted, ADA-compliant boardwalks, where appropriate, designed for storm resistance and to be constructed with a variety of materials as dictated by the terrain and proposed use. Some of these public access areas will include short fishing platforms/piers depending upon adjacent land and water uses and subject to federal and state permit approvals. Some of the public access areas also will include boat ramps for launching motorized and/or nonmotorized (kayaks, canoes) boats along with supportive parking areas.	Harrison	Yes	No	No	Yes	No	Yes	Yes	30	Yes	stormwate	$ 15,000,000.00	$ -	
	Research and Education	2138	10/4/2014	Mississippi Gulf Coast Litter Control	This project would provide for a permanent effort to control litter in the three coastal counties and the near shore environments for the purposes of ecosystem restoration AND increased tourism. Permanent staff would be hired to work with cities, counties, law enforcement, private business and community groups to identify and implement a range of litter reduction strategies including: on-going public information campaign, increased enforcement of litter laws, and improvement of laws and regulations if needed. All of our roadways, waterways, and drainage areas have plastic items, cigarette butts, fast food wrappers, drinks cans scattered along them. These items leach dangerous chemicals, harm wildlife and pollute our waterways. They create an unfavorable impression for visitors.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	Yes	No		Yes		$ -	$ -	
	Research and Education	2141	10/8/2014	Gulf of Mexico Alliance Restoration Coordination	The proposed project provides programmatic support for the Gulf of Mexico Alliance's collaborative partnership to coordinate restoration-related activities among the various agencies, organizations, resource managers, scientists, consultants, and industry experts in the region. The Gulf of Mexico Alliance proposes to conduct the coordination through its priority issue teams that are well-established and in direct alignment with the goals of the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan. Coordination provided by the Gulf of Mexico Alliance provides the initial core steps in addressing a concern that restoration projects and programs conducted in the Gulf are not being coordinated to maximum efficiency. While Council-level activities are highly coordinated by the RESTORE Council, the Gulf of Mexico Alliance provides the venue for on-the-ground resource managers, scientists, consultants, and industry experts to communicate and collaborate on a regular basis regarding the activities that are being conducted by many regional partners. Deliverables include reports identifying the following: -On-going list of projects being implemented either as a result of DWH-funded settlements or other non-DWH project efforts (an online feature could be added as appropriate); -Projects that may have overlap and duplicity with recommendations for solutions to leverage resources; and -Regional initiatives that may impact or inform restoration. Through the priority issue teams and the larger partner network as a whole, agencies and organizations involved in restoration activities will be better informed and able to make project implementation decisions with the maximum available information regarding on-going efforts in the region. As a result, priorities can be aligned, activities can be planned with minimal duplication, and leveraging opportunities can be identified. The overall budget request is $467,500 per year for five years or $2,337,500 total.	Gulf of Mexico	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 2,337,500.00	$ -	
	Research and Education	2143	10/8/2014	Watershed Assessment Tool for Coastal Restoration	This project will utilize the resources described below to construct, maintain, and utilize a watershed assessment tool for coastal restoration. This tool will allow interactions with resource managers such as the Mississippi State Department of Environmental Quality and the Mississippi Department of Marine Science to assess both project and cumulative impacts of restoration activities. This tool will be calibrated and verified with scientific field and laboratory investigations and in conjunction with ongoing monitoring conducted by the Mississippi Department of Environmental Quality and the Mississippi Department of Marine Resources. Improved water quality is essential to restoration of coastal habitats and is among the highest priorities identified by Mississippi stake holders. An ability to assess watershed process that contribute to degraded water quality is a necessity to identify activities within the watershed that can lead to improvements. Watershed management activities such as stream restoration, best management practices in agricultural areas, and low impact development practices in urban areas are all techniques to improve water quality. Consequentially, monitoring and modeling of freshwater inflows into the Mississippi coastal systems is required to assess the sustainability of ongoing and planned restoration. Researchers at Mississippi State University (MSU) are well experienced with the Watershed Modeling System that contains watershed and water quality models and Geographic Information Systems that are used in detailed watershed assessments. MSU has also conducted water quality modeling in Saint Louis Bay, numerous studies of coastal habitats such as beach erosion, stream restoration, and bank/shoreline stabilization. Additionally, MSU has acquired a complete hyperspectral data set for Grand Bay National Estuarine Research Reserve for habitat delineation and quality assessment. MSU will also have a complete data base of high resolution topography using Light Detection and Ranging (LiDAR) for the 6 counties of the gulf coast by spring of 2015. These data will provide hydrographic maps for use by state and county managers and baseline conditions for hydrologic modeling. Mississippi State University researchers have extensive experience in watershed management practices to improve water quality. For example, wetland construction and restoration to improve water quality and riparian stream restoration for both habitat and water quality improvement are major components of applied research at MSU. The Watershed Assessment Tool will be calibrated and verified with field and laboratory studies and applied to restoration projects in the watershed to evaluate effectiveness. Workshops will be conducted with state and local resource managers to ensure that ongoing and proposed projects are effectively evaluated for hydrologic assessment and potential for water quality improvement. Public outreach will be	Hancock, Stone, St. Tammany , Mobile, Jackson, Pearl River, Forrest, Perry, Orleans, Harrison, George, Washingt on	Yes	No	No	Yes	No	Yes	No		No		$ 3,200,000.00	$ -	

	Research and Education	2149	1/1/2015	Edible Forests of the MS Gulf Coast	This project will develop fruit orchards in every city and county in the three county of the MS Gulf Coast, Harrison, Hancock and Jackson counties. The Mississippi Urban Forest council will partner with our Tree City communities along the coast, local garden group and civic groups to develop the orchards. Training will be provided to citizens and those involved in the development of the orchards. Oversight for long term maintenance will be provided. Correct fruit varieties for the area, soils and climate will be taken into account for selection of species. This project will provide model orchards, encourage more local fruit production, provide education to implement sustainable orchards, improve healthy eating and provide sources of value added products for local citizens.	Jackson, Harrison and Hacnock	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 450,000.00	$ -	
	Research and Education	2154	10/24/2014	Projecting the Impacts of Restoration Activities in MS Coastal Waters	The overarching objective of this project is to advance our informational basis of physical-biogeochemical linkages in the Mississippi Sound (MS) and northern Mississippi Bight (MB) region through execution of a field effort consisting of research cruises and moorings that obtain measurements needed to inform a state of the art modeling approach. The observations will characterize bottom sediment type, seasonal variation in sediment, nutrient and dissolved oxygen distributions, resuspension and transport of sediments under influence of wind forcing and surface waves, and hydrodynamically driven material exchanges between the MS and MB. The model system, supported by this knowledge, will be a platform that allows resource managers and restoration scientists to project the impact of RESTORE activities, thus enabling better-planned restoration efforts that have a higher likelihood of sustained success. Numerous coastal restoration projects in the state of MS have been proposed to meet RESTORE program goals http://www.msrestoreteam.com/ppp/overviewmap.html. Some of these efforts aim to restore hydrology patterns, marshes and barrier islands with the intent of mitigating the issues noted above, among others. In order to fully remedy harm and reduce risk to the natural resources of the Mississippi Gulf Coast, comprehensive understanding of the MS is required. Without this understanding, well-intentioned RESTORE projects may realize short-lived success. The overarching goal of the combined observational and model synthesis approach we have proposed herein is to advance our informational basis through execution of a targeted field effort and integrate the acquired knowledge into a state of the art modeling approach that will enable better-planned restoration efforts, with higher likelihood of sustained success, as well as advance our understanding of current and future vulnerability. To attain the needed informational basis on waves, currents, sediment transport, and distributions of sediment, nutrients and dissolved oxygen, we propose to utilize moored instrument arrays and shipboard sampling to record the critical physical, geochemical and bio-optical measurements needed to characterize the processes and distributions of interest. These measurements will be used to inform and validate a model system that simulates the circulation, waves, sediment loadings and biogeochemistry of the MS and the hydrodynamic and material exchange with the MB. The resulting modeling system will be ideally suited as a tool for scenario exploration that provides assessments and insight into the viability of proposed restoration projects and resource management strategies. In particular, the model will provide temporally varying distributions of nutrients, dissolved oxygen, salinity and suspended sediment, all of which contribute to vitality of ecosystem function in the MS.	Hancock, St Tammany ,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	Yes	15	Yes		$ 1,100,000.00	$ -	
	Research and Education	2155	10/27/2014	Establishment of an Algae-for-Aquaculture Center for Mississippi	PI for this Project: Dr. Gordon Cannon, Vice President for Research USM The global population is rapidly increasing and is expected to surpass nine billion by 2050. As the population continues to grow, the ability for the world to feed itself will become increasingly more difficult. Environmental factors and limitations on water, land, energy, and other vital resources will further stress food production throughout the world. New technologies that do not compete with current human food production resources and processes are urgently needed to support the growing food demand. Fish are a major source of high-protein food, and the demand for fish is increasing world-wide at a rate approximately double that of population growth. The worldâ€™s oceans, however, cannot meet the increasing demand for fish, so aquaculture production must continue to expand to bridge the growing gap between what the oceans can provide and what the world demands. High-protein fish require high-protein diets, and fishmeal, the primary source of protein in marine speciesâ€™ diets, is in short supply given that it is derived from the worldâ€™s oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the worldâ€™s oceans and does not compete with terrestrial food production is urgently needed. Algae are a promising candidate for fishmeal replacement (some species have protein levels in excess of 60%), and the State of Mississippi has the climate and resources necessary to support efficient algal biomass production. Further, the University of Southern Mississippi (USM), through its Gulf Coast Research Laboratory (GCRL) and Thad Cochran Marine Aquaculture Center (CMAC) affiliates, has the marine biology and aquaculture expertise necessary to understand algal biomass utilization and to ultimately validate algae as a fishmeal replacement in future aquaculture feeds. General Atomics (GA) proposes to team with USM to establish an algae-for-aquaculture research center to demonstrate the value of algal biomass as a high-protein ingredient in future commercial aquafeeds. A research-scale algae growth facility utilizing GAâ€™s existing technology will be constructed at USM, on or near the grounds of the GCRL. Algae strains high in protein will be the focus for research. The facility will initially utilize algae strains provided by GA, but subsequent efforts will utilize local Mississippi algae strains, after suitable isolation and optimization at GA. The algal biomass produced will be used to conduct fish feed trials at CMAC using the substantial aquaculture research infrastructure already present as well as the cell biology, marine science, and analytical support capabilities of USM. The results of initial fish feed trials will be used to modify algal strain selection and/or algal growth parameters as required to improve the overall fish health and growth rate observed in subsequent feed trials. The program will also allow USM to establish an aquafeed formulation and feed production capability	Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		$ 12,000,000.00	$ -	
	Research and Education	2162	11/5/2014	Enhancing Community Resilience with Social Media	Social media constitutes an important new form of communication-based social capital that can have profound effects for individuals, communities, and organizations, including their capacity to respond to emergency situations. Leveraging the ongoing research conducted by the Social Science Research Center (for the purpose of the grant awarded by Coastal Storm Awareness Program - C-SAP, Connecticut, NOAA), with the overarching goal of validating the role of social media as a key communication tool between emergency management agencies and affected communities, researchers propose a real-time communication system (relying on the social network Twitter) to improve community resilience in the Mississippi Gulf Coast areas. The communication system would be an organic network of local governments, emergency management agencies, businesses and individuals/communities who choose to participate in the network. The system will also leverage the models developed for C-SAP research by implementing machine learning and geo-spatial analysis tools to monitor relevant social media messages during the occurrence of an adverse physical event (such as weather emergency). Administrative agencies such as local governments, emergency management, and community representatives can utilize the system to address concerns of the public and help disseminate important weather related information via the network. The communication system will also provide tools for identification of key influencers in the network to provide an effective medium for information coverage/dissemination. In addition to functioning as a public advisory mechanism during adverse events, the system can also act as a discussion platform between governing officials and their residents thereby promoting public discussion of key topics related to the betterment of communities and their individuals. Another application area of the system can be as an information source where, individuals pose questions to government officials or administrative authorities. Thus, the overall goal of the proposed system is to enhance the engagement of local communities and administrative authorities in order to promote locally driven solutions for planning, risk assessment and natural resource management within communities. The proposed system will be based on a web-based application platform for ease of access to any individual with access to Internet and a computer/smart device.		Yes	No	Yes	Yes	No	No	Yes	5	No		$ 450,000.00	$ -	

	Research and Education	3214	11/14/2014	St. Louis Bay and Tributaries, MS Comprehensive Restoration Program: Phase I	The Deepwater Horizon oil spill caused direct and significant harm to Mississippiâ€™s St. Louis Bay and the Mississippi Sound. St. Louis Bay and its tributaries offer an ideal ecosystem for a water quality and quantity restoration program to demonstrate a comprehensive, integrated approach to holistic restoration which could be transferrable Gulf-wide. Water quality assessments and monitoring provide a foundation for programmatic, science-based decision-making to coordinate, expand and integrate many ad hoc projects proposed by local stakeholders, or from various comprehensive plans. This effort will aggressively identify, engage and include local governmental, non-governmental and private stakeholders in a transparent process to identify, prioritize, permit and implement priority water quality and quantity projects while building new partnerships to leverage technical and financial resources during implementation and for long-term operation and maintenance. This program proposes a new collaboration between Mississippi State University (MSU), the U.S. Department of Agriculturâ€™s Natural Resources Conservation Service (NRCS), Jackson State University (JSU) and the Pickering Firm, Inc. (PFI) to address the Gulf Councils water quality and water resources goals and objectives. MSU and PFI have a longstanding Memorandum of Understanding which has been used repeatedly on complex projects that integrate research and implementation. The Gulf Councilâ€™s five restoration goals are; 1) coastal, estuarine and marine habitats, 2) fresh, estuarine and marine water quality, 3) living coastal and marine resources, 4) enhance community resilience and 5) a restored and revitalized Gulf economy. Seven objectives support these goals; 1) restore, enhance and protect habitats, 2) restore, enhance and protect water resources, 3) protect and restore living coastal and marine resources, 4) restore and enhance natural processes and shorelines, 5) promote community resilience, 6) promote natural resource stewardship and environmental education, and 7) improve science-based decision-making. JSU, PFI, and NRCS provide MSU with the depth and breadth of technical and professional expertise to support this program. The programâ€™s geographic location and size encompassing the St. Louis Bay and tributaries was selected to meet the Councilâ€™s four priority criteria. Specifically, this holistic approach is easily scalable to address all the Councilâ€™s goals and objectives and transferable to be replicated throughout the Gulf region and; ï¾Will significantly and measurably contribute to restoring and protecting the Gulf Coast Regionâ€™s natural resources, ecosystems, fisheries, marine and wildlife by concentrating and coordinating individual projects; ï¾is large enough to substantially contribute to restoring and protecting the Gulf Coast ecosystemâ€™s natural resources,	Hancock, Stone,Pearl River,Forrest,Harrison	Yes	Yes	No	Yes	No	Yes	Yes	20	Yes		$ 14,968,000.00	$ -	
	Research and Education	3239	11/17/2014	Inner-City Tidal Stream Restoration	Inner-City Tidal Stream Restoration Scope Much of the tidal habitat along the Mississippi Gulf Coast is distributed in small waterways that flow through inner-city neighborhoods. A healthy inner-city tidal stream has four critical functions: nursery habitat for marine life; flood-way for tidal storms; discharge and treatment for storm water; and convenient public access to natural environments. Unfortunately, most of the inner-city tidal streams are seriously impaired, have been modified and degraded over time and are not providing the ecological services that these four functions support. Many of them have been reduced to drainage channels, thus only functioning to discharge storm water â€“ and often not doing that well. Restoring inner-city tidal streams to provide all four of the critical functions not only creates important tidal marsh habitat, it improves storm water management and flood mitigation, and if done with good community involvement, it increases environmental stewardship. Successful inner-city restoration projects show that bringing nature into neighborhoods helps people see the value of protecting natural environments not only close to home but in larger, wilder places away from our cities. Partnership The proposal is submitted by the Gulf Coast Community Design Studio. The Gulf Coast Community Design Studio (GCCDS) was established on the Mississippi Gulf Coast in 2005 to work in communities impacted by Hurricane Katrina and has evolved from disaster recovery work to addressing long-term issues of affordable housing, healthy communities and resilient landscapes and infrastructure. The GCCDS is a research and professional service program of Mississippi State University College of Architecture, Art and Design. Located five hours from the main campus the GCCDS operates with a full-time staff of architects, landscape architects and planners and always works in close collaboration with multiple non-profit, municipal and professional partners. The work of the GCCDS includes: 1) community-based housing design, 2) storm water and tidal ecology, 3) flood resilient buildings and landscape, and 4) public-driven decision making. The GCCDS operates with around $600,000 annual grant and contract income with national funding partners including HUD,	Hancock, Harrison, Jackson	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 90,000.00	$ -	
	Research and Education	4244	11/18/2014	National Center for Strategic Planning and Emergency Response	Natural and man-made disasters are a part of this nationâ€™s landscape as evidenced dramatically on the Mississippi Gulf Coast by Hurricane Katrina and the Deepwater Horizon Oil Spill. News of other disasters, contagious diseases and national security threats is a daily occurrence. Strategic planning and preparedness is essential for the protection of life and property and quick response to and recovery from such events. To provide strategic planning and training services to communities, individuals, businesses and officials who plan and prepare for, take actions to protect against, respond to and oversee recovery from disasters and emergencies, Mississippi Gulf Coast Community College (MGCCC) proposes the â€œNational Center for Strategic Planning and Emergency Response Training.â€ With a robust focus on strategic planning and community resilience, the goal of this project is the planning, development and implementation of a comprehensive center that will provide strategic planning and training services to a local, regional and national audience. Objective 1: Planning activities shall include the establishment of an advisory team consisting of local, regional and national representatives, defining a specific mission and scope of work for the Center, identifying a physical location for the Center, and researching best practices for Center operations. Objective 1 outcomes will be a well-qualified advisory team, a mission statement and scope of work for the Center, a defined location for the Center and the identification of best practices for use in the deployment of the Center. Objective 2: Development of the Center shall consist of physical, operational and programmatic activities. Activities will include securing and equipping a physical location, hiring Center personnel, development of strategic planning methodologies, training programs, a marketing plan and other activities as required to meet the outcome of establishing an operational, National Center for Strategic Planning and Emergency Response Training. Objective 3: Implementation of the Center will focus on initiating the developed strategic planning process in the local coastal community and expanding it to other communities nationwide and on offering the identified and developed training to communities, individuals, businesses and officials who are on involved in strategic planning and the preparation for, response to and recovery from disasters at the local, regional and national levels.	Harrison, Jackson, Hancock, Stone, George, Pearl River	Yes	No	No	No	Yes	No	Yes	75	Yes		$ 20,000,000.00	$ -	

	Research and Education	4264	12/19/2014	Mississippi Aquarium	This project proposes a world-class aquarium to be built along U.S. Highway 90 in Gulfport, Mississippi on a total of approximately 18 acres of land overlooking the redeveloped Jones Park and Small Craft Harbor. Depending on features, shows, and exhibits, it could be as large as 130,000 square feet, and cost in the neighborhood of $120,000,000. This facility will serve to fill the void left by the loss of the Marine Life Oceanarium and provide for a much-needed family-friendly and education-oriented tourism facility for our Gulf Coast market. Unlike many projects that seek either full funding or have no stakeholder buy-in, this proposal has been in the works for some time, with the understanding by Gulfport city leaders that in seeking support, local commitment must be demonstrated to emphasize the significance of the shared vision of making this a reality. On December 2, 2014, the City Council unanimously approved obligating $14 million of City funds toward the purchase of approximately 10 acres of land to be acquired for this project site. When combined with the County Library and CTA properties, there will be roughly 18 acres for development as a campus for this project which has the potential to also include retail, restaurant, and lodging amenities. The appeal of this location is not only the scenic overlook, but the elevation itself is more desirable than at the waterâ€™s edge. It is important to note that this section of Gulfportâ€™s downtown remains under-utilized, undeveloped, and modestly blighted. From an urban renewal standpoint, this is a home run! Obviously, the economic benefit to Gulfport and the surrounding communities can be a game changer through increased tax revenues and site leases. The Gulfport Redevelopment Commission will have developmental authority over this project, and has taken a methodical approach to performing due diligence measures in order to achieve an accurate picture of what the potential for this ambitious development represents. To that end, David Kimmel, former Construction Project Manager and Executive Director of the Georgia Aquarium, has been hired as a consultant to assess options, reach out to industry contacts, and make recommendations to guide our progress. A market assessment is currently underway with the objective of confirming the range of customer draw, anticipated number of visitors, exhibit type, animal/species features, interactive attractions, physical plant requirements, square footage size recommendations and configuration, and ticket prices our market will bear. From a partnership standpoint, we have the commitment of the Harrison County Board of Supervisors to transfer title to a parcel of land containing the old Harrison County Library building adjacent to the existing campus. Coast Transit Authority has committed to developing that structure and the adjacent underutilized parking garage into a multimodal transit station, to include visitor information and pedestrian services, bicycle rentals, and bus stop access. In conjunction with the Mississippi Department of Transportation, they are also engaged in developing support for a pedestrian tramway/crosswalk over U.S.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		############	########	
	Research and Education	4277	12/29/2014	Highway 603 Corridor	Water quality is a tremendous factor in the growth of a community, impacting economic stability through tourism, property values, as well as access to recreation and locally-harvested food. Although water quality in the Gulf of Mexico is affected by many large water bodies, small scale improvements may have a positive effect on both the Gulf and within the local community by providing access to natural spaces and improving sites for fishing and swimming as well as increasing community resilience. Highway 603 is a major corridor to the community with high traffic speeds, long frontages, and loosely planned infrastructure. The low elevation of the roadway and its proximity to multiple water crossings causes multiple environmental and community resilience problems: poor water quality due to non-point source runoff, persistent flooding, low density land use, and ditches that occupy a large percentage of the right-of-way rendering alternative transportation path construction impossible. This project will analyze areas where improvements may positively impact water quality and community resilience along the Jourdan River and tributary waterways: Breath Bayou, Bayou LaCroix, Four Dollar Bayou, Edwards Bayou, and Bayou Talla. The project will set up a water sampling program to determine current issues such as: sewer concerns and effluent overflow, roadway and impervious surface runoff, or over-fertilization of lawns. This project will identify areas to address the problems identified: conserve lands in perpetuity, restore landscape filters for sediments and pathogens, intercept runoff, provide access to water and the natural environment, and connect with alternative transportation pathways. Water quality monitoring will also be performed after improvements to measure the changes, as well as the number of days the road is flooded per year.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 570,000.00	########	
	Research and Education	4278	12/29/2014	Restoring the Ditch	A partly channelized ditch supplies a large amount of runoff into the Mississippi Sound and causes persistent beach closures in a very popular beach area. Although there is a low forested area adjacent to the drainage way, it provides limited ecological service for improving water quality. The geometry of the ditch is straight and direct, and it has steep sides, contributing sediment from erosion of the banks, and reducing the potential for settling and filtration during rain events. The extent of this mini-watershed extends past Central Avenue and the railroad tracks. Initially, the water quality (and quantity) will be monitored to determine the problem: is it animal waste, sewer issues, or other bacterial sources? We will work with the City of Bay St Louis Public Works and REACH, a program of Mississippi State University, to set up a water sampling program. The proposed project will then address the specific problems identified. Actions may include: repair lift stations, enlarge drainage space, introduce settling areas for sediment, and replant stormwater drains to filter other undesirable contents. Water quality monitoring will also be performed after improvements to measure the changes. The outfall is located in proximity to MDEQ Hancock County Sampling Station 04 [EPA:MS356172], which is frequently listed as water Contact Advisory as a result of high bacterial pathogen indicator levels.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		Yes		$ 350,000.00	########	
	Research and Education	4279	12/29/2014	Vacation Lane Restoration	A low wetland area consisting of forested lots which led to the Mississippi Sound was damaged during Hurricane Katrina. This area now provides limited ecological service for improving water quality and frequent beach closures. Current development pressures are low, but little has been done to replant fragmented wetlands or remove impervious surfaces. Outfall is located in proximity to MDEQ Hancock County Sampling Station 03 [EPA:MS594393] which is often listed as water Contact Advisory as a result of probable high bacteria levels. Because of the habitat damage, the wetland area and the lack of a healthy forest have decreased the protective aspects for community resilience for this site, for both incoming and outgoing flows of water. The first step will be to monitor the water quality (and quantity), to determine the problem: is it animal waste, sewer issues, or other bacteria sources? We will work with the City of Waveland Public Works, and REACH, a program of Mississippi State University, to set up a water sampling program. The proposed project will take action to address specific problems identified through: repair of lift stations, enlarging drainage space, removing construction debris and abandoned slabs, introducing settling areas for sediment, and replanting stormwater drains to filter undesirable contents. Water quality monitoring will be performed after improvements to measure changes.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		No		$ 320,000.00	########	

	Research and Education	4303	1/20/2015	Project Management in Support of MS RESTORE and NFWF Projects	Just as an integrated ecosystem monitoring and modeling network is critical to understanding the interconnected Gulf ecosystem, it is also critical to design, develop, and implement this network as a Comprehensive Integrated Project. A detail Project Management Plan will be prepared from all the individual proposals. Project Management Principals and Procedures are an ideal way to ensure that the execution of this science based system is successful and served the needs of the resource management, regulatory and emergency response community (hereinafter referred to as decision makers). The project will follow a modified spiral development approach, where each proposal will represent a spiral. Figure 1 in the following attachment, highlights the complexity due to the number of organization performing research and implementation of funded projects in the Gulf. A large effort of coordination between all developing organizations will be required to minimize unwanted duplication. Table 1 in the following attachment, provides the basis for the starting requirements for the observing system, and forms the project management basis for all further actions. A Requirements Traceability Matrix (RTM) will be established and maintained throughout the design, development, testing, and implementation phase of each spiral. A key component of the Project Management Plan will be defining how the large amount of data being collected will be managed, and what information products derived from those data are needed by decision makers. Deep Water Horizon once again highlighted the need for a better understanding of the environment and ecosystem making up the Gulf of Mexico region. Many agencies, at all levels of government, universities, NGOs, and industry are more involved in understanding the complex environment of the Gulf. Resources from the penalties from the oil spill are being provided to NFWF, NAS, and the RESTORE Act and other for the restoration of the Gulf. These programs will generate large amounts of environmental data and information. These funding sources will direct how these data and information are to be managed. Each recipient of funding will be required to manage their data in accordance with the funderâ€™s policy. Working with NOAA and Restoration Council funders, plan to develop a Data Management Policy and Procedures for managing all these collected data. All data collected under these funding initiatives have to open and free to the public. These data have to be discoverable and accessible to users. These data have to be preserved for future generations. This Project Management Plan will define all the Data Policies and Procedures needed for all these data types collected. It will be the responsibility for each of the funded proposals to actual process these data to the Project Management Plan direction. As part of the Project Management Plan, project personnel will interact with NOAA, the EPA, the MS-DEQ and MS-DMR to	Hancock, St Tammany ,Mobile,Jackson,Harrison	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 2,000,000.00	$ -	monitoring and Data Synthesis
	Research and Education	4313	2/3/2015	Mississippi Maritime Museum	As early as 1700 the chronicling of vessels being built on the Pascagoula River began, and in the 300 years of documented building records since that time, thousands of vessels from shrimp and fishing boats, ships, luxury liners, barges, cargo carries, research, supply and military vessels as well as off shore drilling structures have been constructed in whole, or in part, in the waters of the Mississippi Gulf Coast. Jackson County is Mississippi's largest tonnage Port, home to one of the nation's largest oil refineries, Ingalls/Northrop Grumman Shipyard and one of the National Oceanic and Atmospheric Administration's research labs. To insure that the maritime history is passed along to this generation and the next, a group of Pascagoula residents organized to establish a museum to tell the story of our maritime history and the importance of our water ways to the Mississippi Gulf Coast. The Mississippi Maritime Museum, Inc. (MMM) was formed in 2007 and since its inception the group has worked diligently to streamline its efforts by developing a Board of Directors, committees, an operating plan, establishing a 501 (3)c organization and writing by-laws. The MMM Board's primary mission is to preserve, educate, promote and exhibit Mississippiâ€™s maritime history for the present and future generations. In March of 2013 the MMM purchased two buildings on DuPont Ave that were formerly part of the Pascagoula High School. The MMM Boards primary goal was to have a fully functioning maritime museum by 2016-17. The larger of the two buildings will be the future home of Mississippi Maritime Museum, while the smaller building will serve as a workshop and preservation area for museum materials. A preliminary museum design for the Math & Science building has been developed with the help of Mississippi State University School of Architecture and an estimate cost to renovate that building is 1.5 million with another 1.0 million for display cases, exhibits, models, movie on maritime history, etc. Bringing a permanent maritime museum to fruition would not only preserve our maritime history but would benefit the Gulf Coast community by: 1) Increasing tourism along the Mississippi Gulf Coast, 2) Create jobs for local citizens during construction and long term jobs for museum staff, 3) Increase revenue to local hotel, restaurants and retail stores in Jackson County, and 4) Education: Enhance knowledge of the benefits of Maritime Related Industry to Mississippi youth.	Jackson	Yes	No	Yes	Yes	No	No	Yes	0.01	Yes		$ 2,500,000.00	########	
	Research and Education	4329	3/5/2015	Neotropical Migratory Songbird Preserves for the MIssissippi Coast	The Mississippi Gulf Coast is important habitat for trans-Gulf neotropical migratory songbirds. The habitats immediately along the Mississippi Sound are the first terrestrial habitats the birds reach flying north in the spring and the last terrestrial habitats they see when flying south in the fall. Restoration of maritime forests with a plethora of fruit-producing and insect-harboring species would provide important food resources for migrating songbirds.	Harrison,Jackson,Hancock,St Tammany ,Mobile	Yes	No	No	Yes	No	Yes	No		No		$ 250,000.00	$ -	
	Research and Education	4332	3/5/2015	Biloxi Flats - Tchoutacabouffa River/Tuxachanie Creek Watershed & Gulf Coastal Plain Savanna Restoration - De Soto National Forest	The southeast corner of De Soto National Forest encompasses part of Harrison and Jackson counties in southern Mississippi. This area of the Forest contains the headwaters of the Tchoutacabouffa River/Tuxachanie Creek Watershed. This watershed drains into the Back Bay of Biloxi and is a vital part of the Mississippi Gulf Coast, influencing both water quality and coastal plain wildlife habitat. Within the Tchoutacabouffa River Watershed there is an area now known as Biloxi Flats. Biloxi Flats encompasses 2,500 acres of coastal plain savanna in need of restoration. Bayou Billie drains a significant portion of Biloxi Flats. This area once contained suitable Mississippi sandhill crane habitat, as evidenced by records of crane sightings and nests on National Forest land. Habitat on the nearby MS Sandhill Crane Refuge is well maintained by the US Fish and Wildlife Service, but the dense pine woods now found in the Biloxi Flats area are unacceptable nesting, roosting, and feeding habitat for cranes. Fire suppression, pine plantations in low areas, draining of land and nearby development have changed the historic vegetation structure. Stands of pine trees and thick underbrush now occupy what was once open gulf coastal plain savanna. Restoration of coastal plain savanna will promote recovery efforts for this species and provide habitat for many plants and animals (e.g. orchids, pollinators, crayfish) that depend on the existence of this ecosystem type. Ecosystem restoration work will also ensure consistent management across the landscape by aligning the Forest Service with the US Fish and Wildlife Service as both agencies work toward restoring and maintaining the connectivity of habitat utilized by the Mississippi sandhill crane. Longleaf pine rises in Biloxi Flats will also be restored and maintained in healthy condition to complement the savanna. Pitcher plant bogs and flats will be restored throughout Biloxi Flats and the rest of the Tchoutacabouffa River/Tuxachanie Creek Watershed as funding allows. Restoration, thinning, and prescribed burning are part of the short and long term management plans for the entire watershed. Installation of interpretive signage and significant trail improvements will be completed in the Tchoutacabouffa River/Tuxachanie Creek Watershed to educate the public on the principles and practices of ecosystem restoration and provide better opportunities for recreation. Signage will also educate forest users about sensitive plant and animal species as well as threats to ecosystem health.	Jackson,Harrison	Yes	No	Yes	Yes	No	Yes	No		No		$ 3,038,000.00	$ -	

	Research and Education	4336	3/9/2015	Stabilize Downcutting Streams in the Upper Jourdan River watershed	The main streams that make up the upper Jourdan River watershed are continuously downcutting. This is certainly true of Hickory Creek and White Cypress Creek. It no doubt applies to Catahoula Creek, but I have no personal knowledge of this one. This means that each stream has a headcut that is working it's way upstream and is converting a stable e type stream that is connected to its floodplain to an entrenched one that goobles up soil during floods, as it disconnects from its floodplain. Moreover, every stream and drain that goes into them also necessarily exhibits the same phenomenon as it cuts down at the same rate. The resulting soil loss ripples through the entire watershed and into the Mississippi Sound. Inland, wetlands (floodplains) are lost and hydrology of surrounding soils is altered. Vegetation is lost. All the streams mentioned have county road crossings that will be threatened in the not too distant future. In the marine environment, the extra siltation affects oyster beds and grass beds, thereby taking a toll on the fishery and oyster resource. It was interesting to note that one the tables in the breakout session of the marine resources meeting in Bay St. Louis on Feb. 26 had people around it who fish Bay St. Louis. They complained of their fishing spots getting silted up. At that same meeting oysters came up at table after table as a key cultural resource for the Mississippi Gulf Coast. I would advocate a project, assuming landowner cooperation, to stop head cuts in the affected streams, as well as possibly add grade control structures along the way. Although it's possible to spend a lot of money doing this, it need not be the case. There are techniques involving concrete rubble and ground stabilization cloth that have been shown to be effective.	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	
	Research and Education	4337	3/11/2015	Back Bay Biloxi Shoreline and Habitat Restoration	Project will restore shoreline area, ensuring growth of emergent plants including Spartina, Juncus, and other grasses and trees that have been lost to erosion. Several acres will receive remediation and land will be extended to include a narrow beach that has been lost due to increased force of wave action. The select means of restoration will improve conditions for more than a dozen endangered species in the area as shown in this proposal.	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	health & s	$ -	$ -	
	Research and Education	4343	7/24/2015	West Jackson County Constructed Wetlands Restoration Project	The West Jackson County Constructed Wetlands Treatment System was established in in 1990 to treat the centralized wastewater collected in western Jackson County, Mississippi. As wastewater passes through multiple cells of wetland vegetation, excess nutrients, heavy metals, and other environmentally harmful contaminants are removed from it prior to release into Costapia Bayou. In addition to wastewater treatment, the wetlands are a favored habitat for a variety of wildlife and serves as a complementary habitat to the adjacent MS Sandhill Crane National Wildlife Refuge. Due to the concentration of birds in these wetlands, we formed an agreement with the National Audubon Society to open the facility for avian observation and counting every Thursday. For the last several years, the wetland vegetation has been decimated by the invasive apple snail. Apple snails are a serious threat to freshwater wetlands and estuaries worldwide, with severe damage documented along the Gulf of Mexico coast. Consumption of wetland vegetation by the apple snail has led to drastic reductions in the wastewater treatment efficiency and wildlife habitat. The main objectives of this proposal are to restore the functionality and habitat provided by this treatment wetland through eradication of the apple snails and restoring of vegetation. The Jackson County Utility Authority has begun efforts to remove apple snails under monitoring by the MS Departments of Environmental Quality and Marine Resources. However, limited resources have hampered these efforts. We would like to expand upon these activities by researching and implementing the best methods for removing apple snails, followed by replanting of the wetland vegetation using peer-reviewed methods to maximize habitat and water treatment. Throughout all steps in this project, water quality, percent coverage of vegetation, and snail abundance will be quantified to determine the benefits of restoring this wetland. We will also implement outreach activities by using this site as a demonstration and education project that will be open to the public, for guided tours, on select days. The expected outcomes from this project are preservation and restoration of wetland habitat, increased wastewater treatment efficiency, improved water quality, significant contributions to knowledge base for the control of apple snails, and workforce development through hiring and training of new employees to address this problem and funding graduate research.	Jackson	Yes	No	Yes	No	Yes	Yes	Yes	62	Yes		$ 650,000.00	$ -	
	Research and Education	4370	5/28/2015	USM Gulf Park Beachfront Pier Restoration	The University of Southern Mississippi's Gulf Park campus is the state's only beachfront campus. This campus had a fishing/recreational pier extending out into the Gulf of Mexico for many years. The pier offered academic, research and recreational opportunities for students, faculty, and staff as well as local residents and tourists. Over time and as a result of storms and other harsh events, the pier eventually was overcome by the elements of nature. The purpose of this proposed project is to reconstruct this pier and once again offer the direct Gulf access that had been in place for the above mentioned Mississippi residents and other stakeholders for many years. Also, with USM's growth in the areas of marine and coastal science, this pier will be a critical academic and research resource for Mississippi's premier university marine related programs.	Harrison	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ 1,500,000.00	#######	
	Research and Education	5377	7/3/2015	Habitat Restoration Stewardship Fund	Habitat restoration in coastal Mississippi has lagged behind habitat restoration in other states, even when some grants for habitat restoration were available because of the lack of start-up funding or the lack of matching funding for habitat restoration grants. We propose that some RESTORE funding be provided to an agency in Mississippi, perhaps the Mississippi Department of Environmental Quality, Office of Restoration, on an annual basis for a period of 20 years that can be used to leverage existing funding sources to implement on-the-ground habitat restoration. These habitat restoration techniques may include, but are not limited to, invasive species control, prescribed burning, fuel reduction, hydrologic restoration, and native species planting. The funding could be available on a competitive basis and would be available to match federal, state and local government funding or private funding. Requiring that these funds be matched at least dollar for dollar level would double the amount of money available for habitat restoration by leveraging funds and effort from a variety of sources including federal, state and local government agencies, non-profit organizations and private businesses. Many of the currently missed funding opportunities are from federal sources; using a small group of federal and state agency representative and non-governmental organization representatives to rank the projects annually would encourage cross-communication and cooperation in leveraging their resources to better restore habitats on the Mississippi Gulf Coast. Having the flexibility in a funding stream to engage on-going efforts and novel funding streams would allow the state of Mississippi to make maximum use of available resources. The benefits of a long-running habitat restoration stewardship fund include leveraging of existing resources, development of new habitat restoration resources, better planning for habitat restoration, improved coastal habitats, better protected keystone and rare species, cleaner soil and water resources, enhanced resilience to disturbances, and more jobs for local communities.	Hancock, Harrison, Jackson, plus others as appropria te	Yes	Yes	No	Yes	No	Yes	No		Yes		$ 20,000,000.00	#######	

	Research and Education	5383	7/31/2015	MS Gulf Coast Economic Development Data Project	Project summary Southern Mississippi Planning and Development District will create and maintain a one-stop resource for consistent, accurate, up-to-date data across the Mississippi Gulf Coast counties of Hancock, Harrison and Jackson. It will be designed with input from and for use by professional economic developers, local governments, tourism bureaus and others actively seeking to create new jobs, grow existing business and stimulate more wealth along the coast. A standardized approach to data collection will benefit the entire region. Data collection input and display Data collected will be organized and maintained in a geospatially-enabled database management system. SMPDD will use a dedicated GIS server and provide user login and password-protected access for authorized users. One of the major features and benefits of this solution will allow continuous access to the most updated data, as the server will retrieve data directly from the working database. The data may be displayed in static tables or in user-generated tables, allowing online map viewing and hard copy downloads. Data categories and areas of research SMPDD will seek input from the professional economic developers to determine the fields for the database. Some data may be available on a public domain and other data may be purchased. Topical areas may include but are not limited to â€" - Population and projections - Growth patterns - Building permits - Workforce/labor - Infrastructure - Real Estate and property tax Potential partners We will seek and anticipate cooperation with â€"	Harrison, Hancock, Jackson	Yes	No	Yes	Yes	Yes	No	No		Yes		$ -	$ -	
	Research and Education	5385	8/11/2015	Airport Canopy Solar Farm	Background: Sustainability is an important component to the continual growth and operation of airport facilities. The Gulfport-Biloxi International Airport has worked diligently to develop a sustainability strategy. The strategy was developed with the support from the Federal Aviation Administration. One element of the overall sustainability strategy is renewable power. The airport seeks to accomplish this objective through the generation of power utilizing solar panels. The utilization of BP Deepwater Horizon Oil Spill funding for the development of a sustainability effort such as this allows an entity who is a major user of electricity in the community to become more self-reliant. BP funds are used for an initiative that will realize a reoccurring return on investment. The Airport has a rental car parking area where the vehicles of 5 rental car companies are parked within 150 parking spaces. This parking lot is ideally situated for a solar canopied parking structure to be erected and installed. The structure serves a dual purpose in that it generates renewable power that will reduce the amount of electricity purchased by the Airport thus reducing the overall environmental footprint of the airport while providing covered parking spaces for the rental cars on airport. Typically large expanses of land are utilized for solar arrays making large tracks of land unavailable for other uses. This design and placement of this structure actually increases the usage of the area by accomplishing the two purposes noted above. Discussion: With this design, wildlife habitats and vegetation are left undisturbed further reducing possible erosion events. The providing of shade also helps to diminish the heat island effect of a solid surface parking lot. As electricity prices continue to rise, having available generation to reduce electrical grid demand is increasingly important for airports. The power generated from the solar panels reduces the demand from the local electric utility therefore reduces the amount of power needed to be purchased which allows funds to be better allocated for amenities for the traveling public and to further carry out other sustainability goals and objectives The Gulfport-Biloxi International Airport recognizes that the canopied solar structure in the rental car parking lot is an essential element of the airportâ€™s sustainable, renewable energy plan. Summary/Benefit to Region:	Harrison	Yes	No	No	No	No	No	Yes	90	Yes		$ 3,600,000.00	########	
	Research and Education	5387	8/13/2015	Continuation of Hancock County Beach Pathway	Project Summary: The extension of the Hancock County Beach Pathway is needed to provide greater access to all people in Hancock County to the beachfront. The beach pathway provides access to the waterfront for people as a daily part of life. The path can be used as transportation, for recreation, for meditation and for social gathering. Additionally, because of the construction of the beach pathway is scored concrete, the pathway is accessible to people who may require help in getting around. The flat surface of the pathway is easily accessible for mobility-impaired (those using wheelchairs, scooters, walkers, crutches and canes). The proposed project will provide indirect benefits to the natural coastal environment through the provision of public recreation and access to the marine and coastal environment. The provision of the walkway and education opportunities tied to the walkway will create an appreciation of the unique natural attribute of the coastal environment. Improved access leads to a greater appreciation and understanding of the need for improved water quality and protection of natural resources. Also, by utilizing existing waterfront access space as fully as possible and minimizing the need for new waterfront access sites, this project directs development away from sensitive natural coastal environmental resources. During Hurricanes Georges, Lili and Katrina, the completed section of the pathway that is attached to the seawall sustained little to no damage and held the sand beach in place. The seawall that did not have the beach pathway adjacent to the seawall sustained severe cracks. Therefore, the beach pathway also serves as a necessary form of sustainability for the remaining beachfront area of Hancock County. In addition, the proposed project is consistent with the Hancock County Sand Beach Master Plan and, as such, is consistent with elements defined in the Mississippi Coastal Program. The Beach Pedestrian & Bike Pathway extends from the Bay Bridge in Bay St. Louis to just past Dane street in Waveland. The remaining section of beach front in Hancock County that does not have a pedestrian - bike pathway is from Dane street to the Silver Slipper Casino. Currently, the County has received grant funding from MDOT & USFWS Coastal Impact Assistance Program to complete approximately 1.0 miles of beach pathway from the Silver Slipper Casino to the end of the sanded beach area. Approximately 0.4 or roughly 2200 LF of Beach pathway has been completed with 0.6 remaining. Once this section is completed, Hancock County will have two sections of beach pathway that are not connected. The proposed RESTORE Project would be approximately 2.5 miles of beach pathway that connect the two finished sections of beach pathway providing for one continuous pedestrian bike pathway from the Bay Bridge to the Silver Slipper Casino.	Hancock	Yes	No	No	Yes	No	No	Yes		Yes		$ 2,500,000.00	$ -	

	Research and Education	5392	9/1/2015	Point Cadet Waterfront Boardwalk, Marina and Small Craft Harbor Expansion and Tricentennial Park Improvements	Through implementation of this comprehensive project to improve public access and balance public-private development along Point Cadet's southern waterfront from the Biloxi-Ocean Springs Bridge to the Biloxi Small Craft Harbor in downtown Biloxi, the general public, the State of Mississippi, the City of Biloxi and private developers will benefit. The project includes upgrading the existing Point Cadet Marina and expanding it west and constructing an ADA-compliant public boardwalk with amenities that will meander along the waterfront to the Biloxi Schooner Pier Complex, where a lighted crosswalk will provide safe pedestrian access across Highway 90 to Tricentennial Park and the Ohr-O''Keefe Museum. In the same area, the public boardwalk will connect with the existing seawall walkway to provide pedestrian access to the Biloxi Small Craft Harbor in downtown Biloxi, which also will be expanded and upgraded to support growth of the charter boat industry and expansion of sports fishing tournaments and other water-dependent activities that will benefit the local and state economy. The Point Cadet Marina upgrade and expansion component will provide new slips to meet market demand to accommodate 75-foot and larger recreational and sports-fishing yachts owned/operated by Mississippi Coast residents and Intercoastal Waterway visiting boaters. Removal of marina sediment will restore boater safety and will accommodate deeper draft, large recreational boats. The project involves reconfiguring and upgrading finger piers and existing boat slips, constructing new boat slips and finger piers to the west and installing a new breakwater to increase the resiliency of shoreline improvements and the expanded marina by protecting them from wave action and storm surge. The public boardwalk, which will include open-air pavilions, lighting, educational signage and a northern docking area to support the State''s shuttle service to Deer Island, will be constructed to support public enjoyment of the waterfront,to expand family-oriented activities and to provide small business development opportunities. The public waterfront area due south of the Biloxi-Ocean Springs Bridge enjoyed considerable public use for a wide variety of family-oriented activities prior to Hurricane Katrina, including fishing tournaments, festivals, concerts, educational programs, observing marine life and shore birds, and just generally appreciating nature. Since 2005, the State fishing pier and shoreline boardwalks have not been replaced and the area poses safety hazards to the few who attempt to access the waterfront to fish or to enjoy the view. Through this project,the City of Biloxi will restore safe access through construction of the ADA-compliant boardwalk that will include amenities to support a variety of public waterfront uses. Low-profile, all-weather signage will be installed to educate the public about native marine species, native and migrating bird species and restoration of other natural resources including nearby Deer Island. Existing surface parking north of the Point Cadet Marina will support increased public usage in the project area; a portion of the parking area will be restricted in support of educational and research vessel staff and	Harrison	Yes	Yes	Yes	Yes	No	Yes	Yes	80	Yes		$ 35,000,000.00	$ -	
	Research and Education	5393	9/1/2015	Public Access Improvements and Point Cadet Marina Improvements	The City of Biloxi is partnering with the State of Mississippi to restore safe access to the Point Cadet waterfront area south of the Highway 90 Bridge with an ADA-compliant boardwalk to support a variety of public waterfront uses. Signage will be installed to educate the public about the Mississippi Coast's natural resources and restoration activities at a nearby oyster reef and Deer Island. Sediment will be removed from the Point Cadet Marina to improve safety. Prior to Hurricane Katrina, this area enjoyed considerable public use for a wide variety of family-oriented activities including fishing tournaments, festivals, concerts, educational programs, flying kites, observing marine life and shore birds, and just generally appreciating nature. Since the storm, the State fishing pier and shoreline boardwalks have not been replaced and the area poses safety hazards to the few who attempt to access the waterfront to fish or to enjoy the view. With funding assistance, the City of Biloxi will restore safe access to the waterfront through an ADA-compliant boardwalk that will include lighting and seating to support a variety of public waterfront uses. Low-profile, all-weather signage will be installed to educate the public about native marine species, native and migrating bird species and restoration of other natural resources including Deer Island. Implementation of the project will encourage residents and visitors to rediscover this public asset and will spur the revitalization of this unique waterfront resource. Project design is being coordinated with the Mississippi Secretary of State's Office and Department of Marine Resources to most efficiently restore safe public access to this Tidelands area and to maximize public benefit through appropriate land uses that support a broad range of family-friendly and educational activities. Existing surface parking north of the Point Cadet Marina will support increased public usage in the project area; a portion of the parking area will be restricted in support of USM research vessel staff and operations. The existing green space between the parking area and the new boardwalk will be enhanced as an open space for special events and the public's daily enjoyment. Removal of marina sediment will restore boater safety; dredging also will accommodate deeper-draft, large recreational boats. Upgrades to marina finger piers and boat slips will support the City's renewed efforts to diversify its "blue economy" through sailing regattas and fishing tournaments. The public boardwalk will provide safe pedestrian access along Point Cadet's eastern shoreline south of the Highway 90 Bridge and along the section of the southern shoreline that supports the Point Cadet Marina. The boardwalk eventually will connect with the Sand Beach, Biloxi Schooner Pier Complex and a Highway 90 crosswalk to provide safe access to the Ohr-O'Keefe	Harrison	Yes	No	Yes	Yes	No	No	Yes	60	Yes		$ 4,000,000.00	########	
	Research and Education	5394	9/1/2015	Biloxi Small Craft Harbor Expansion	Through this project, the City of Biloxi will renovate and expand the Biloxi Small Craft Harbor to allow all Biloxi-based charter boats to berth together in one central harbor located on Biloxi's Lateral Channel with direct access to East and West Channels. Highway 90 binds the harbor to the north and is within half a mile of I-110, in close proximity to major resort hotels. The project involves adding slips east of the harbor and reconfiguring existing slips to accommodate all of Biloxi's existing charter boats. Currently, the harbor is bordered on the west by a casino and its parking garage, which hinders accessibility and obscures its visibility to the public. Expanding the harbor to the east will not only provide needed new slips, but will allow for improved accessibility and enhanced presence on Highway 90. Rather than being tucked away from sight as it is now, the new harbor will attract tourists and residents to enjoy public improvements that showcase the waterfront, offer a variety of marine-related services including boat charters, and offer educational information about Biloxi's marine heritage. In addition to approximately 60 new slips, the renovated harbor will have public restrooms and facilities to weigh, display and clean fish. Other public amenities will include staging areas for sports fishing tournaments and other marine-related events such as children's fishing rodeos. Space also will be available for "off the boat" seafood sales and retail venues for ice and other typical supplies to support charter boat fishing. Educational information about Gulf of Mexico deep-water species, local ecology and the cultural history of deep-sea fishing in the Mississippi Sound will be prominently displayed throughout the harbor complex to present an authentic interpretation of Biloxi to tourists and new residents. The new Biloxi Small Craft Harbor will be a prominent link in a chain of amenities located along Highway 90 from central Biloxi to Point Cadet, which includes the historic downtown district, the Biloxi Town Green, the Ohr-Oâ€™Keefe Museum of Art, the Schooner Pier Complex, the proposed Tricentennial Park, Harrahâ€™s waterfront park venue, St. Michael's Church, the Maritime and Seafood Industry Museum and the new Biloxi Waterfront Park and Fishing Pier. During development of Biloxi's Post-Katrina Comprehensive Plan, citizens identified expansion of recreational opportunities and improved access to the waterfront as top priorities, both of which will be supported through this project. Expansion and reconfiguration of the Biloxi Small Craft Harbor will generate many public benefits including improved public access to a waterfront area in downtown Biloxi, improved use of public waterfront space and resources through consolidation of	Harrison	Yes	Yes	Yes	Yes	No	No	Yes	80	Yes		$ 6,000,000.00	########	

	Research and Education	5395	9/1/2015	Tricentennial Park Public Improvements	Tricentennial Park, located on the north side of Highway 90 in East Biloxi, was purchased to preserve public access to valuable waterfront property that boasted the restored, historic Tullis-Toledano Manor and some of Biloxi''s finest old live oak trees. Damage from Hurricane Katrina destroyed the Manor and its outbuildings, but many of the oaks survived and the site continues to serve a public purpose by preserving unobstructed views of the Mississippi Sound. Through this project, the City seeks to improve the eight acre site to complement activities of the Ohr-O''Keefe Museum of Art (located on the west side of the site); to provide pedestrian access across Highway 90 via a crosswalk to connect the park with the Sand Beach and Schooner Pier Complex; to restore a wetlands area on the southeast portion; and to enhance recreational opportunities on the park''s east side. Improvements will include uniform landscaping, lighting, irrigation and walkways, additional parking on the northeast portion of the site, interpretive signage, relocation of the Biloxi Tricentennial mosaic mural to the park, and rebuilding a berm to support a band-shell/gazebo for outdoor concerts and other activities. Before development of Highway 90, the southeast portion of the site was tidally-influenced and will be restored as a wetlands garden area with interpretive signage identifying the benefits of restoring and/or preserving wetlands in Coastal Mississippi. A pedestrian crosswalk across Highway 90 will be installed to provide public access to connect the park with the Sand Beach and Schooner Pier Complex. Benefits derived from implementation of this project include, but are not limited to, improved public access to a public park with magnificent views of the Mississippi Sound and Deer Island; expanded public recreational park space for picnics and other leisure activities; restored wetlands and improved water quality to support marine species and public recreational uses. Benefits also include expanded educational opportunities through signage and displays to educate the public about the value of the Coast''s natural resources and habitats. Increased visitation to the park as a result of project implementation is anticipated to have regional economic benefits, such as job creation and increased sales tax collections, by stimulating redevelopment in East Biloxi. Match for the project, valued at an estimated $90,000, will be provided by the Ohr-O''Keefe Museum of Art in the form of in-kind services contributed for architectural and landscape plans; in-kind labor provided by the Harrison County Public Works	Harrison	Yes	No	Yes	Yes	No	Yes	Yes	40	Yes		$ 840,000.00	#######	
	Research and Education	5399	9/2/2015	Point Cadet Revitalization from Highway 90 Bridge to I-110 Corridor along the Back Bay of Biloxi	This comprehensive project will revitalize waterfront areas of East Biloxi from the Highway 90 Bridge north and west to the I-110 Corridor through multi-use improvements to enhance and restore natural resources, create jobs, support the seafood and maritime industries, and expand family-oriented attractions to extend visitors' stay on the Mississippi Gulf Coast. Throughout the project area, the City will provide safe, convenient public access to the shoreline and will enhance traditional working waterfront activities with a variety of land uses that showcase local seafood through shopping, dining, entertainment, and educational venues. RESTORE grant funds will be used as part of a public investment strategy to yield a long-term increase in value by revitalizing the Back Bay shoreline east of the I-110 Corridor and adjoining Old Biloxi neighborhoods by enhancing public access to the waterfront and revitalizing the seafood industry through public improvements that will include expanded commercial dock space and supportive landside amenities. The project will include incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program. Redevelopment of the project area, as well as of the local seafood industry, has been particularly slow following its devastation by Hurricane Katrina. The Back Bay Festival Marketplace and recreational marina component of the overall project will be located at the site of the Sherman Canaan Fishing Dock, which includes approximately 15 City-owned acres at the north end of Lee Street. This public waterfront area will be reconfigured to offer a marina with recreational boat slips for temporary and long-term rental (for private and for-hire vessels); venues for retail shops and restaurants; a sailing school; and space for Mississippi Department of Marine Resources boating safety lessons and boating storage/operation. The market place will include an open-air kitchen area to showcase local seafood and to educate the public about seafood cooking methods and opening oysters, as well as facilities for workforce training in culinary arts that focuses on Gulf seafood and locally-grown/raised products. Shrimping boats currently berthed at the Sherman Canaan Fishing Dock will be relocated east to a new commercial marina that will be constructed on previously-developed property to be acquired by the City in the vicinity of Oak Street. This new marina will improve commercial boat access to Gulf channels and will offer landside improvements such as convenient off-loading areas, boat-building and repair areas, marine services and net repair areas. Pedestrian walkways will link these two activity hubs to each other and to other points of interest in the project area, including the National Register, City-owned Old Brick House and	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 35,000,000.00	$ -	
	Research and Education	5400	9/2/2015	Pine Street Waterfront Access Road and Maritime Commerce Corridor	The Pine Street Waterfront Access Road and Maritime Commerce Corridor in East Biloxi will extend and improve Pine Street from 5th Street south to Highway 90, concurrent with implementation of the City project to extend Back Bay Boulevard from Oak Street southeast to Pine Street and then south to 5th Street with funding assistance provided through the Mississippi Development Authority's Economic Development Highway Program. The improved Pine Street will be a four-lane, divided boulevard for greater safety and aesthetic appeal. The comprehensive project goal is to improve public access to waterfront commercial, industrial and recreational venues in East Biloxi thereby stimulating the economic growth of existing marine-related commerce, such as the shrimp boat off-loading docks at St. Michael's Fuel and Ice Dock on Biloxi Bay at the foot of 5th Street. Improved access also will stimulate redevelopment of East Biloxi through new business start-ups and the expansion of tourism and recreational waterfront amenities.	Harrison	Yes	Yes	Yes	Yes	Yes	No	Yes	90	Yes		$ 20,000,000.00	#######	
	Research and Education	5401	9/2/2015	Point Cadet Sunrise Park: Biloxi Tip of Peninsula Public Access and Shoreline Stabilization Improvement Project	The City of Biloxi is requesting funding support to remove marine debris and to restore the shoreline of Point Cadet from the Biloxi-Ocean Springs Bridge north to the Biloxi Fishing Bridge. Debris removal, storm-resilient shoreline stabilization measures and pedestrian access improvements along the City-owned waterfront property will expand public opportunity to access a unique area where the Mississippi Sound merges with the waters of the Back Bay of Biloxi. The project will enhance preservation of undeveloped shoreline for the benefit of the public as well as for marine and bird species. In addition, low impact all-weather educational signage will expand opportunities to learn about habitat supported by tidally-impacted areas and to encourage long-term stewardship of Coastal natural resources. The project includes extending the small sand beach on the shore east of the Maritime and Seafood Industry Museum; incorporating the use of the seawall in improving pedestrian access; improving the safety and security of the walkway under the Biloxi-Ocean Springs Bridge; and constructing a small pier for fishing and crabbing. Upland improvements to be built near the MSIM include a shoofly around a mature live oak tree; a gazebo; a fountain; a foundation for the Golden Fisherman statue; and a wooden boat-building and training demonstration site. Those who attend the many activities hosted at the MSIM and/or Biloxi Waterfront Park frequently are tempted to walk along the shoreline north of the Park's splash pad to access the nearby Biloxi Fishing Bridge. Hurricane debris, litter, unchecked invasive plant growth and lack of a well-defined, level walkway make what should be an enjoyable nature walk into a hazardous experience. Project implementation will address this problem by providing ADA-compliant pedestrian connectivity along the shoreline of the project area. In addition to the general public, others who will benefit specifically from project implementation are shoreline and wade fishermen, throwers of cast nets and those who enjoy non-motorized water activities such as kayaking, canoeing, and paddle boarding. Participants in the MSIM's numerous educational activities and summer camps for children also will benefit from expanded on-site marine-related programming. Marine species and native and migratory shore birds also will benefit from project implementation through replacement of invasive, non-native plants with native plant species appropriate to the shoreline environment.	Harrison	Yes	Yes	No	Yes	No	Yes	Yes	60	No		$ 500,000.00	#######	

	Research and Education	5402	9/2/2015	West Biloxi Festival Boardwalk and Boat Ramp	The portion of Harrison County Sand Beach in Biloxi located between Rodenberg Avenue and Camellia Street is noteworthy because much of it is separated from Highway 90 by a swath of land upon which is built tourist-oriented establishments that form a buffer between the shore and the highway. While this section of beach is especially beautiful, the buffer formed by businesses and condominiums makes access to the beach less visible and less inviting to passers-by. The project, which involves a partnership of the City of Biloxi and Harrison County, aims to increase public access to this portion of the beach through construction of an environmentally-sensitive boardwalk with linking walkways to adjacent businesses and to new public parking areas located at intervals with appropriate signage. Construction of a boat ramp at Camellia Street will provide access to the Mississippi Sound for the boating and fishing public. The boardwalk will border the edge of the sand beach along the seawall, south of existing commercial development. It will provide a pedestrian venue to facilitate access to the beach and it will be a destination in itself that will draw people to the area and increase business. It also will be a setting for festivals and other outdoor community activities. Two pavilions will be constructed along the boardwalk, one east of Veterans Avenue and one near the Camellia Street boat ramp to support field trips, festivals and general recreation. The boardwalk will have intermittent shaded areas, benches and kiosks. Low impact signage will explain beach ecology in the area, including identification of native plants and shoreline birds. Project benefits include increased access to the Mississippi Sound for West Biloxi boaters and fishermen; expanded economic opportunities for area restaurants and retail businesses; improved access to the West Biloxi waterfront; expanded recreational and educational opportunities on the Harrison County Sand Beach.	Harrison	Yes	No	Yes	Yes	No	No	Yes	80	Yes		$ 6,000,000.00	$ -	
	Research and Education	5405	9/24/2015	Expansion of Blue Crab Aquaculture in Mississippi: New Economic Opportunities for Coastal Fishery Development	A reduction in blue crab harvests and the continuing decrease in numbers of juvenile blue crabs in estuaries across the Gulf of Mexico have stimulated interest in the use of hatchery-reared crabs in stock enhancement activities (should diminished recruitment occur in the fishery) and the development of new fisheries. Mississippi is one of only two states in the U.S. with a blue crab hatchery. The ability of USM/GCRL to produce â€œseedâ€ crabs has great potential for development of a bait crab fishery and expansion of the soft crab fishery. Pond culture of blue crabs would greatly reduce pressure on natural populations and would allow for fishery development independent of wild stocks. Interest in new fishery opportunities for Mississippi fishermen and inland pond aquaculture ventures led to the formation of the Mississippi Blue Crab Aquaculture Consortium. The Consortium is focused on establishing blue crab aquaculture in Mississippi, specifically the culture of small crabs for soft crabs and bait to create new domestic value-added products based on hatchery production technology.The proposed work addresses several RESTORE program areas including: 1) workforce development through training and participation in new fisheries, 2) research and technology transfer and development through partnership with the Mississippi Blue Crab Aquaculture Consortium members (USM/GCRL, Mississippi Department of Marine Resources; USDAâ€™s Mississippi Natural Resources Conservation Service; Alcorn State University), 3) aquaculture through production of a high-valued product for human consumption and a cultured bait for recreational fishing, 4) fishery economics through new fishery development, and 5) resource management through conservation of wild stocks.Re-location and expansion of the current hatchery will provide additional technical jobs as well as employment opportunities for fishermen and entrepreneurs interested in new fisheries. Inland farmers with ponds will be afforded the opportunity to culture new species. Workforce development and training will occur through outreach activities and technology transfer that will focus on pond culture techniques and marketing.	Jackson	Yes	Yes	No	No	Yes	No	Yes	30	Yes		$ 13,000,000.00	$ -	
	Research and Education	5420	10/2/2015	Gulf Coast Broadband Project	The Mississippi Gulf Coast is in need of ultra-high-speed, fiber-optic, broadband infrastructure for Internet service that has sufficient scope, flexibility, availability and affordability, for all of its citizens, governments, and private businesses and industries to be able compete in regional, national and international markets for the creation and retention of new jobs, technologies, businesses, and industries and for the expansion and retention of equal opportunities for all citizens to enjoy a more prosperous, just, dignified and fulfilling life. The experience of many states and communities around the nation has been that large corporate providers of data transmission facilities do not have sufficient monetary incentive to bring affordable and ubiquitous, ultra-high-speed broadband Internet service to them unless there are significant public efforts and incentives to bring that technology to a proximity to all homes, businesses and public places that will make the final connectivity and service to all homes, businesses and public places by retail public and private service providers accessible and economically viable to the retail public and private service providers, affordable to the end users, and competitive in regional, national and world markets. The Cities of Biloxi and Gulfport established a unified effort to promote development of a minimum 1-Gig ultra-high speed Internet connectivity via a Fiber Optic Ring encompassing the entire Mississippi Gulf Coast. Subsequently, as of October 2016, eight other coastal cities and two of the three coastal counties have joined with Biloxi and Gulfport to form the Gulf Coast Broadband initiative. With RESTORE funding assistance, the Fiber Ring will be implemented and administered by the GCBI, thereby providing to all area residents and businesses an affordable, ubiquitous and timely ultra-high-speed broadband Internet service. It will be delivered from the Fiber Ring to all end users by competitive licensing with private Internet Service Providers. The Gulf Coast Broadband Initiative has been created through an interlocal governmental cooperation agreement and is a separate legal and administrative organization with the authority to acquire any interest in real and personal property necessary to create and maintain the regional fiber optic ring in all of its parts. In order to eliminate the â€œdigital divideâ€ and create equal opportunity for all residents and businesses to enjoy reasonably affordable access and use of ultra-high-speed Internet service, the Initiative may contract with for profit and non-profit business	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	85	Yes	agriculture	$ 15,000,000.00	$ -	
	Research and Education	5421	10/6/2015	Economics and The Gulf Coastal States	The Objective is to collect economical data for the Gulf Coast fishermen, Anglers, processors, charter for hire and businesses that rely on our Nations marine resource to provide food and jobs for our Nation. This project will attempt to capture the true value of our Gulf of Mexico States marine resources and seafood to the Nation as a whole. Activities include the collection of economic data which will include mail out surveys, email surveys, phone calls to various users of our resources to validate the data collected from the mail out surveys. We will also meet face to face with many of our businesses. We will collect economic data from the products harvested throughout the entire seafood supply chain. We have never collect the true value to regional businesses benefitting from Gulf seafood. In most surveys they only show the x-vessel price. We will do a literature review to make sure we have included all value from the fish to the plate and all the jobs that depend on our Marine resource and all revenue that our nation receives. One example is Menhaden is used for making oil, fertilizer, dog and cat food. The oil is used as the primary ingredient in WD forty. This example is to show how the value chain comes into play and the many jobs that are created through the value chain. The outcome is to have a social and economical survey that will help capture the true value of the commercial seafood industry to the Nation as a whole. We will also provide the other businesses that depend on the seafood from the Gulf of Mexico to make their living. This data has never been collected before. If a Disaster should strike again we will have the true value and as an extra bonus of this proposal .Our science center will have the information and so will our fishery management councils that use this type of information in their management plans.		Yes	No	No	No	No	No	No		No		$ 5,000,000.00	$ -	

	Research and Education	5452	12/8/2015	TechTown Pascagoula	TechTown is a â€œtechnology and entrepreneurial learning center offering year-round after-school programs and summer camps.â€ TechTown provides skill-building and certification curriculum for five focus areas including robotics, programming, film and arts. In contrast to the original TechTown Chattanooga, the proposed TechTown Pascagoula would be a 5,000 sq ft extension center offering focus areas customized for the jobs in our community. TechTown has a strong emphasis on securing scholarships for underprivileged youth. In addition to youth programs, TechTown also offers technology focused programs for adults and seniors. A TechTown Pascagoula program would combat the documented recruitment needs of local industries who are spending countless hours travelling to recruit necessary workforce. TechTown Pascagoula would spark the interest of local youth region-wide in STEAM (Science, Technology, Engineering, Arts, and Mathematics) related jobs of which Pascagoula is fortunate to be plentiful in. A facility of this magnitude would be the first in the State and have a multi-county and multi-state draw. Headquartered in Pascagoula, it would serve as a great partnership with Ingalls, Chevron, Singing River Health Systems, the Pascagoula-Gautier School District, the City of Pascagoula, the Mississippi Gulf Coast Community College (MGCCC), and MGCCCâ€™s recent collaboration with Mississippi State University among unforeseeable others. Attachments include presentations explaining TechTown and the capabilities.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	50	Yes		$ 2,000,000.00	$ -	
	Research and Education	5453	12/11/2015	GoCoast Trust Fund	The proposed project will fund a perpetual GoCoast Trust Fund that will provide: (1) debt and equity financing of qualified private and public projects that will repay loans with interest and yield a return on equity investments; and (2) grants to public agencies for urgent public projects that do not generate revenue directly, especially eco-restoration projects. The Trust Fund will provide a long-term, economically-sound framework to stimulate regional economic recovery and growth that serves long-term public interests, and it will have the flexibility to adjust to market-driven changes in the regional, national and world economies. The GoCoast Trust Fund will be governed by a three-member Board of Trustees, composed of one resident from each of Hancock, Harrison and Jackson counties. The Governor shall appoint the trustees, subject to the approval of the Mississippi Senate and House of Representatives, for four-year terms, coterminous with the Governor. All actions of the Board of Trustees must be by unanimous vote of the Trustees. Operating expenses of the Trust may be funded from Trust Fund income and any public or private grants obtained by the Trust. On or before September 1st of each year, the Trustees shall submit to the Governor, the Legislature, and MDEQ (1) a â€œPlan of Investmentsâ€ for the next state fiscal year itemizing all proposed investments and projects for the next fiscal year, (2) financial statements of the Trust for the previous year, and (3) financial statements projected for the next five years. Prior to submitting each Plan of Investments, the Board of Trustees must submit the Plan to all state Senators and state Representatives representing any part of the three Coast counties. If a majority of Senators and Representatives submit an objection (in writing) to any specific project in the Plan, then that project shall be deleted from the list of projects that may be funded by the Trust in that fiscal year. The Trust will operate in the nature of a public investment bank to fund projects that address economic development; infrastructure; eco-restoration; research and education; seafood; tourism; or workforce development. Priority will be given to projects that stimulate and accelerate long-term, regional economic recovery and growth; job production; tax-base expansion; and quality of life for Mississippi Gulf Coast residents. Selection must be based on projects that, â€œbut forâ€ GoCoast Trust assistance, otherwise would likely not go forward within a strategic timeline and scope of development according to the long-term strategic plan adopted by the Board of Trustees. The operating office of the Trust shall be located within the three Coast	Hancock, Harrison and Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		############	$ -	
	Research and Education	5459	12/23/2015	Welcome Center / Tourism Center	Develop a site and construct a welcome/tourism center for the City of Pascagoula. The City has much to offer, and several large employers bringing visitors to the area. Often, these visitors miss the jewels of Pascagoula and Jackson County in favor of larger facilities in other nearby cities. A welcome / tourism center would provide meeting space, information about local attractions and facilities, and would complement other similar venues on the Coast.	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	90	Yes		$ 5,000,000.00	$ -	
	Research and Education	5464	1/25/2016	Highway Connectivity Project for City of Moss Point	A project to provide ease of transportation, accessibility and safety along the Interstate 10, Highway 63 and Highway 613 corridors from Old Saracennia Road north of I-10 to McInnis Avenue and Grierson Street south of I-10. 1. Interchange improvements and extension of service roads along with service road improvements along the I-10 and Hwy. 63 and 613 corridors. 2. Transform the Pascagoula Street/River Road/Griffin Street/Dantzler Street corridor into a major improved connector between Hwy-90 and Hwy-613, with widening, turning lanes, improved drainage, resurfacing, lighting, etc. 3. Widening and improvements along Grierson & McInnis Ave. from Hwy-63 to Main St. (Once Hwy. 90) to create greater access and increased flow to downtown from the east. Also include a stop light and cross walk at McInnis & Main and straightening and widening of McInnis in front of City Hall with added parallel parking. 4. Turning lanes and a traffic light at Hwy-613 and Dutch Bayou Road to create a new main entrance and exit at the Pelican Landing Conference Center, at the intersection. 5. Extend Audubon Way eastward across Main Street to Morris, creating a new intersection and creating commercial development opportunities.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes		Yes		$ -	$ -	
	Research and Education	5468	3/28/2016	Rutherford Fishing Pier Extension	Bay St. Louis proposes to construct/extend the Rutherford Fishing Pier which is located at the Municipal Harbor. The existing pier is approximately 1,200 LF in length and is well known in Hancock County as one of the best locations for pier fishing. Due to its reputation as a fishing hot spot, the designated fishing areas are consistently crowded and demand for fishing from piers is at an all time high. This project will extend the fishing area approximately 500 LF and add an open air fishing platform approximately 50' x 75'. This structure will enhance the regional tourist attraction and amenities for the BSL Harbor and will increase the use and public access to the water for recreational use.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 1,500,000.00	$ -	
	Research and Education	5469	3/29/2016	Day Pier Extension	Bay St. Louis proposes to extend the existing Day Pier which is located adjacent to the Rutherford Pier at the Municipal Harbor. The Day Pier is used daily to dock local transient vessels which frequent the nearby downtown establishments. The current pier is approximately 200 LF in length can not support the amount of vessels which frequent the area. The extension would add an additional 400 LF of docking space and enhance and support local and regional tourism efforts.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 300,000.00	$ -	
	Research and Education	5470	3/29/2016	Pedestrian Access Ramp	Bay St. Louis proposes to construct an pedestrian access ramp near Demontluzin St. which would provide ADA access from the downtown area to the BSL Harbor and Rutherford Fishing Pier. This access point is necessary to allow a safe method for tourists to access the harbor and fishing pier. The access ramp will provide public access to enjoy the recreational benefits of the harbor and fishing pier.		Yes	Yes	No	Yes	No	No	Yes		Yes		$ 150,000.00	$ -	
	Research and Education	5472	4/14/2016	Bay St. Louis Natatorium	Bay St. Louis proposes to construct a public natatorium to consist of handicap accessible showers, handicap accessible swimming areas, locker rooms, 50 meter by 25 meter Olympic size swimming pool and multipurpose room. The facility will provide public access to swimming facilitates, swim lessons, partnerships with local school districts for use by swim teams, increase tourist attractions for visitors as well as hosting state and regional swim meets and provide additional activities for local youths.	Hancock	Yes	No	No	Yes	No	No	Yes	10	Yes		$ 5,000,000.00	$ -	
	Research and Education	5473	4/14/2016	Bay St. Louis Public Beach Access	Bay St. Louis proposes to construct public access points along Beach Blvd to the public sand beach at Carroll Ave and Ulman Ave. These access points will be ADA accessible and consist of concrete walkway, timber decking, timber ramp, galvanized steel support structure, lighting, benches, etc. These access points will provide more access for public use of beach for recreational functions.	Hancock	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 500,000.00	$ -	

	Research and Education	5480	4/29/2016	Oyster Restoration through Aquaculture - Aqua Green	In Mississippi and throughout the Gulf of Mexico, the oyster fishery serves as an integral part of the economy and heritage of coastal communities. Events over the past decade such as Hurricane Katrina and numerous anthropogenic events (e.g., spillway openings, oil spill, etc.) have, however, impacted those resources in Mississippi and caused significant reductions in oyster landings and the amount of viable oyster reef habitat present. Identified as a priority by the Governorâ€™s Oyster Council (Council), USM proposes to continue its research and development in the production of eastern oyster larvae in an artificial seawater, recirculating aquaculture system to incrementally scale up larval production to provide a consistent supply of healthy oyster larvae for purposes of restoration and economic development. This supply of larvae will directly support: (a) restoration of the Stateâ€™s public reefs and expansion of private leases to increase annual oyster harvest numbers; (b) creation of living shorelines and reestablishment of natural non-harvest reefs for shoreline stabilization/marsh restoration, fishing habitat, and water quality enhancement; and (c) off-bottom culture (â€œoyster farmingâ€for expansion of the Stateâ€™s commercial oyster fishery. To support these restoration objectives and achieve the Stateâ€™s goal of ten billion eyed oyster larvae annually, acquisition of the Aqua Green aquaculture facility in Perkinston, MS, and retrofitting/expansion of systems there is necessary to provide a platform for this large-scale larval production. Aqua Green was identified by the Councilâ€™s Hatchery Sub-Committee as the recommended hatchery to support Mississippiâ€™s oyster restoration because of its inland location out of harmâ€™s way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	77	Yes		$ 13,000,000.00	$ -	
	Research and Education	5482	5/4/2016	USM Ocean Enterprise at the Mississippi Aquarium	Background The maritime â€¯Blue Economyâ€™ is the largest sector of Mississippi economic activity and includes shipbuilding, shipping (and related), fishing, tourism, defense (and related), and construction activities among many others. New and very large investments are being made to capitalize on this growth potential. We propose to centralize the connections between this massively important state investment with the investments the University has made in marine and fisheries research; business and entrepreneurship; construction; and trade, transportation and logistics. Need Given the magnitude of the investments made by both the state and the University, there is not a centrally located access node to intersect needs of economic development with the intellectual capacity of the University. The nation is full of examples where critical mass has been reached by providing facilities at the nexus of industry, academia and agencies; clearly, these intersections create new and exciting opportunities and push the boundary of innovation. The State of Mississippi needs such a place, and we propose a state-of-the-art facility called The University of Southern Mississippi Ocean Enterprise to be located adjacent to the Mississippi Aquarium in the heart of Mississippiâ€™s Blue Economic Development of Gulfport. Opportunity Through Ocean Enterprise, USM will develop and concentrate expertise in the areas of marine research, economic development, entrepreneurship, trade, logistics and transportation. We will place world leaders in research and education in the facility, and give them access to state and federal partners and to leaders in economic development and private industry. In the facility will be research and education spaces for training tomorrowâ€™s leaders, collaborative spaces to solve the regions most critical problems and community spaces to bring all of the citizenry to the table.	Harrison	Yes	No	Yes	Yes	Yes	Yes	Yes	28000000	Yes		$ 28,000,000.00	$ -	
	Research and Education	5485	6/1/2016	Restore the Coastal Tree Canopy Strategies & Storm Preparedness and Mitigation	Restore the Tree Canopy will work with every city and county in the three coastal counties to identify perpetual public green spaces and enhance those spaces with trees varieties that are sustainable. This project can also work with previously approved RESTORE project to ensure that urban forestry is included in site development. The sites that we work with will be identified by either they city or approved restore project locations such as the conservation green ways or other projects approved. This project will help make-up for or mitigate the natural resources of trees that support habitats of all kinds including native birds, reptiles, and other species. Plus matched and enhance economic benefits. The project will include benefits for people and wildlife. The results will be a series of arborvitae creating a linear coastal green spaces for benefits such as eco-tourism recreation, clean air and water, storm water management, shade, increase property value and many other related benefits. Restore the Tree Canopy Strategies Habitat, Water Quality, Community Resilience Submitted by Donna Yowell, Executive Director of the Mississippi Urban Forest Council 601-672-0755 â€œRestore the Canopy Strategiesâ€ is a project that meets all five of the overarching framework goals of Restore the Gulf. This project will focus on collaborative and sustainable tree planting strategies and activities for local government, citizens, and NGOâ€™s. The project will include ways the community and individuals can actively participate, building knowledge, resilience, conservation activities, and ownership. Communities will learn the benefit of connectedness, to a healthy Gulf, based on actions within their own community. Stakeholder engagement and wide spread collaboration would be another focus. Trees have proven their natural capital to tourism and community economic enhancement, as well. Restore the Canopy is comprehensive in being a Mississippi coast wide project and will cover all three coastal counties with a recommendation to include the other 3 counties in the lower tier of Mississippi. The project will include all cities and counties	George,Harrison,Jackson,Stone,Hancock,Harrison, Jakson and Hanocok, Pearl River,Mobile,St Tammany	Yes	No	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 450,000.00	$ -	
	Research and Education	5494	7/6/2016	SRHS Infrastructure	Portions of the environmental infrastructure of our two hospitals are in excess of 40 years old and are failing. Other environmental utilities such as water utilization, electrical switch gear, and lighting for both acute care hospitals as well as our clinics are using technology that is costing hundreds of thousands of dollars a year more than their modern, energy and resource efficient counterparts. SRHS is proposing to replace failing components such as the SRH cooling tower and electrical switch gear, as well as the inefficient lighting, components of the OSH chiller, OSH boiler plant, and several air handler units at OSH, with modern counterparts that will save SRHS approximately $400,000 a year in operating expense. The cost of the project is estimated at $7,800,000.00, with an ROI of less than 20 years and a projected life in excess of 30, producing a net return on investment in excess of the cost of the project. SRHS is seeking capital funds for this project.	Jackson	Yes	No	No	Yes	Yes	Yes	Yes	100	Yes	healthcare	$ 7,800,000.00	$ -	

	Research and Education	5497	7/12/2016	Restore Project Video Production and Broadcast	It is important that the public be educated as to how the Restore Act funding was allocated to mitigate damage caused by the Deepwater Horizon oil spill. Much of the effort underway is directed at projects with results which will not be readily visible to the general public. The Wilem Group (TWG) proposes to incorporate video segments into its television show Gulf South Outdoors in a manner that shines a light on the Restore progress while still offering enjoyable and entertaining and objectivity not possible if done directly by the State. Gulf South Outdoors has been on the air for 15 years and now reaches 30 million households in most major cities nationwide. The company produced a show episode which focused on the efforts of Mississippi Powerâ€™s â€œRenew Our Riversâ€ project. The show filmed an alligator hunt on the Pascagoula River then segued into the volunteer cleanup effort to stress the importance of being good stewards of our natural resources. The result gave our sponsor well-deserved visibility for their conservation initiative. Similarly, Gulf South Outdoors filmed a duck hunt and then segued into the Nature Conservancyâ€™s ongoing project to restore the Mathews Brake wetlands. In both instances, the intent was to offer viewers an enjoyable outdoor show while highlighting important conservation programs. Many of the Restore Act projects which have been completed or are underway would be ideal for the same type of treatment. A fishing trip for inshore species could be targeted in an area where Restore Act funds were used to construct an artificial reef or restore a shoreline in an estuary. The show would feature fish being caught and then interview the appropriate Restore Act representative to explain how the featured habitat had been created or improved. Cost for this project to highlight six Restore Act projects is $126,000 for one year with the option to continue funding at this same level for up to four additional years. Funding requested herein would be used: - To jointly identify the 6 (six) best projects to showcase.	Hancock, Harrison, Jackson	Yes	No	No	Yes	No	No	No		No		$ 126,000.00	$ -		
	Research and Education	5504	8/1/2016	Grand Bay NWR & Mississippi Sandhill Crane NWR Restoration Project	This proposal consists of habitat restoration and enhancement work on Mississippi Sandhill Crane National Wildlife Refuge (NWR) and Grand Bay NWR, which are part of the Gulf Coast Refuge Complex. These refuges contain a wide diversity of habitats ranging from ecologically important pine-savannas to cypress-tupelo swamps. This project will consist of three components: (1) Pine-savanna restoration at Grand Bay NWR, (2) Aerial waterfowl surveys over Grand Bay NWR and other areas of the Mississippi coast, and (3) Enhancement of waterbird habitat at Mississippi Sandhill Crane NWR. The pine savanna restoration work on Grand Bay NWR will include prescribed burning, invasive and exotic species control, and mechanical treatments. Restoration activities will be monitored to ensure that desired results are achieved. The second component of this project includes biannual aerial waterfowl surveys with the goal of assessing waterfowl populations on Grand Bay NWR and other areas of the Mississippi coast. The third component of the project will include enhancement of wetland habitat on Mississippi Sandhill Crane NWR. Ducks Unlimited will construct one moist soil impoundment on former wastewater sprayfields to benefit waterfowl, waterbirds, shorebirds, cranes, and other priority species. The project includes invasive species control and native grass planting on approximately 300 acres of sprayfields surrounding the impoundments to restore savanna habitat.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 2,902,772.00	########		
	Research and Education	5518	10/17/2016	Elevating the profile of the Mississippi shrimp industry: a post-oil spill Fishery Improvement Project to advance and promote the sustainability of the Mississippi shrimp fishery.	Sustainability projects are the status quo in the seafood industry. The supply chain is being pressured to provide assurances that the product is sustainably harvested. Policies at companies such as Wal-Mart, Sysco, and Whole Foods are very specific and may block product that cannot demonstrate compliance. Despite being harvested under robust U.S. fishery management, most retailers require third-party verification through certifications or fishery improvement projects (FIPs). This proposal seeks to continue developing a FIP for the Mississippi (MS) shrimp fishery to elevate the fisheryâ€™s profile following a tarnished reputation from the Deepwater Horizon Oil Spill. The project has four tiers: 1.Assessment â€“ Sustainability pre-assessments to internationally accepted standards are the basis for FIPs. Some retailers specifically require a Marine Stewardship Council (MSC) assessment. This project will fund an MSC pre-assessment and the transition to a â€˜Comprehensive FIPâ€™ (see Conservation Alliance for Seafood Solutions). G.U.L.F. has recruited stakeholders for a FIP Committee to develop a time bound Work Plan verified by a third-party certifier. Over three years, G.U.L.F. will facilitate meetings of the Committee to track progress of the Plan. 2.Gear inspection â€“ Industry education about turtle excluder devices (TEDs) and bycatch reduction devices (BRDs) is an existing action of the FIP. A major concern in the Gulf of Mexico shrimp fisheries is interaction with endangered sea turtles. In federal waters, vessels are required to carry TEDs and BRDs, and non-compliance with regulations can cause a fishery closure if it passes a set threshold. The project will fund a Gear Inspector to conduct courtesy checks, ensuring TEDs and BRDs are properly installed, reducing the rate of sea turtle capture and the likelihood that fishermen carry non-compliant gear. 3.Industry Outreach: Inshore fleet â€“ Skimmer trawls are currently exempt from federal TED requirements if they adhere to tow time limits (50 CFR 223.206(d)(3)). NOAA is drafting an Environmental Impact Statement for potentially eliminating the TED exemption rule. G.U.L.F. will monitor this rule change, regularly update the MS shrimp industry, and educate industry members on how to submit comments through the rulemaking process. BRDs are not required in state waters. G.U.L.F. will continue to educate harvesters on benefits of BRDs and encourage voluntary use to further minimize bycatch. 4.Consumer Outreach â€“ To communicate the progress of the MS shrimp industry and its devotion to sustainability, G.U.L.F. will attend conferences and education events in MS and across the country, distribute materials encouraging consumers to purchase MS shrimp, and recruit restaurants to join the Restaurant Partnership Program, which encourages them to source domestic seafood and empowers wait staff as ambassadors for the industry.	Harrison,Jackson,Hancock	Yes	Yes	No	No	Yes	No	No		Yes		$ 391,073.00	$ -		
	Research and Education	5525	1/1/2018	Nature Tourism Proposal for the Mississippi Gulf Coast Region: A project and budget plan based on the 2016 process and strategy document,	Tourism and business leaders have realized the necessity of creating an environment of conservation and protection of Mississippiâ€™s coastal resources in the wake of the Deepwater Horizon Oil Spill in the Gulf of Mexico. A great deal of planning has taken place since 2010 to celebrate the natural beauty and wonder of the Mississippi Gulf Coast. There is an area of opportunity in this region that is a most promising method to protect natural resources and promote environmental stewardship while stimulating new economic development. Across the world, nature tourism is recognized as a significant effort to provide responsible travel to natural areas and promote conservation. Nature tourists are looking for original and authentic experiences to high-quality environments with historical and cultural significance. These travelers are more likely to be well educated and travel often in multi-generational groups with extended families. They are seeking safe, well-connected communities that place emphasis on environmentally and culturally responsible travel with low visitor impact to natural areas. The Final GoCoast 2020 Report, commissioned by the Executive Order of Governor Phil Bryant, included focus of â€œEco-Tourismâ€ to be a substantial initiative for recovery, restoration, tourism, and economic development. In response to the worthwhile efforts of the GoCoast 2020 Final Report, a Nature Tourism Task Force was created and adopted the â€œFramework for Nature Tourismâ€ on November 1, 2013. In its conclusion, the Task Force recommended the Mississippi Gulf Coast National Heritage Area (MGCNHA) to lead a nature-based tourism initiative. In 2015, with funding from the National Parks Service, the MGCNHA reinvigorated this Nature-based Tourism Task Force of nineteen (19) Gulf Coast leaders, with assistance from the contracted team of Allen Engineering and Science, Gulf Regional Planning Commission, and the Heritage Trails Partnership. This year-long consultation culminated in the recommendations depicted in the 2016 NBT Plan for Coastal Mississippi (NBT Plan). Accepting the charge to implement a nature-based tourism plan, this Mississippi Gulf Coast National Heritage Area - Nature Tourism Proposal for the Mississippi Gulf Coast Region outlines the framework to manage, operate, plan, market, and implement the recommendations with a budget of $10 million over the next five years. This proposal outlines management and administration, operations, planning, marketing, and implementation. Management and Administration: The MGCNHA will provide general management, oversight, and coordination of day to day operations for the nature-based tourism program. It will provide leadership to local officials and partners to implement the NBT Plan. Six (6) Area Managers will be chosen by each of the six coast counties to serve as liaisons to ensure that initiatives and	George,Harrison,Pearl River,Jackson,Stone,Hancock	Yes	No	Yes	Yes	Yes	Yes	Yes	10	Yes		$ 10,000,000.00	$ -		
	Research and Education	5529	2/8/2017	BSL Harbor Pier 5	The City of Bay St. Louis (BSL) proposes to construct Pier 5 inside the BSL Harbor located at 100 Jody Compretta Drive, near Downtown BSL. The project consists of permitting and coordination with regulatory agencies, design, bidding and construction of a new 10' wide timber pier with concrete piling associated water and electrical utilities and lighting. The BSL Harbor has proven to be an economic driver for Hancock County and BSL since it's opening in 2013 and boasts one of the highest occupancy rates of all harbors on the MS Coast. The proposed Pier 5 project will add approximately 18 65' wet slips and approximately 25 35'-40' wet slips. These slip sizes represent the size range in most demand, all current slips in this size range are leased to long term slip holders.	Hancock	Yes	Yes	No	Yes	No	No	Yes	10	Yes		$ 1,500,000.00	$ -		

	Research and Education	5532	2/16/2017	Bay St. Louis Public Safety Complex	Public safety complex is proposed to include new city court facilities, police department facilities and shelter. The current police department is located in an existing structure near City Hall which is in need of significant repairs and the current facility can not support the growing and more technologically advanced police department equipment. The new location will be more centrally located to and adjacent to the existing fire department which was planned to serve as Emergency Operations Center for the City. The new facility will allow a severe decrease in prisoner transport since the city court will be co-located with in the police department facility and will provide a centrally located public safety complex and shelter for the Citizens of Bay St. Louis.	Hancock	Yes	No	No	Yes	No	No	Yes	15	Yes		$ 5,500,000.00	$ -	
	Research and Education	5540	6/1/2017	Tourism Marketing Strategies	This projectâ€™s scope would be to develop a tourism marketing strategy that would include the creation of an interactive website and attractive brochure/other marketing materials for placement at key locations to highlight the Cityâ€™s unique tourist attractions, lodging opportunities, retail areas, restaurants and other amenities. This informational packet would include a map showing directions to each location. It is anticipated that kiosks could be strategically placed that would aid tourists in finding their desired destinations and to inform of other points of interest. The City does not have a chamber of commerce to help with such items.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes	25	Yes		$ 100,000.00	$ -	
	Research and Education	5541	6/1/2017	Shepard State Park Recreational and Ecological Enhancement	The City of Gautier has assumed the daily operations and management of this 395-acre park, which is located south of U.S. 90 along Graveline Road. Currently, the park consists of eight miles of trails, with a mix of developed and primitive camp sites throughout. In addition, the park has disc golf and a premier outdoor archery range with 28 lanes. The City has increased the utilization of the park by the addition of these amenities and has hosted national archery tournaments, bringing tourists from all over the United States to participate, as well as state high school archery teams and Senior Olympics tournaments. SEC college archery has also expressed interest in using the facility for its conference championship. The facility is one of few within the state of Mississippi and is unique to the state due to its surroundings. The City is already home to the Mississippi Sandhill Crane National Wildlife Refuge and offers birding and wildlife eco-tours of its swamps and bayous, resulting in eco-tourism visitors from all 50 states and numerous other countries each year. The City seeks to add amenities and upgrades as set forth below to Shepard State Park to further enhance, capitalize on and increase the number of tourists for its eco-tourism attractions. The City plans to expand the recreational opportunities available at Shepard State Park to assist in developing this pristine park into one of the southâ€™s premier nature destinations. Expansion of the existing nature trails will be implemented to reach additional areas of the park. Shepard State Park is home to a variety of wildlife native to the coastal area, such as great white egrets, pelicans, eagles and osprey. Additionally, other woodland creatures reside in the area, including deer, wild rabbits, opossums, foxes, raccoons and more. In the surrounding bayous, visitors can see turtles, alligators, wild geese, and a wide variety of fish. Strategically placed resting areas and observation decks will be constructed for creating an environment for optimal opportunities to monitor the wildlife and bird watch, as the park is listed on the Mississippi Coastal Birding Trail. The existing road network throughout the park is in need of repairs. The City is proposing to complete such repairs, clear underbrush and remove invasive species of vegetation. Furthermore, new water and sewer lines will be placed to upgrade and expand sites within the park with such amenities to support additional restrooms, pavilions and playground areas. Power lines and park friendly lighting will be installed to delineate the appropriate pathways for visitors throughout. Due to the age of the park, many upgrades are needed, and this project would include walking trail upgrades, including new foot bridges in low-lying areas prone to flooding, trail clearing, a rehabilitated small boat launch and fishing pier, updated and repaired grills, fire pits and picnic tables at RV sites, an amenities building with laundry facilities and recreational game tables, educational plaques for the trails, fire pits, an outdoor classroom, a natural playground, traditional playground equipment, kayak launches, a lodge to accommodate guests and overnight studies in conjunction with the outdoor classroom, a new bathhouse and bathroom renovations. The City envisions that the lodge will be utilized by educational institutions, including the	Jackson	Yes	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes		$ 9,000,000.00	$ -	
	Research and Education	5542	6/1/2017	Gautier Town Center (The Commons Park)	The City of Gautierâ€™s Town Center is located in the Central Business district, and plans are currently being developed for revitalizing the property of the old Singing River Mall into a major retail development for the City, Jackson County and the outlying areas. The proposed development being considered would include an open air mall, box stores and national tenants to attract interstate commerce. Jackson County does not contain a mall; however, there was one within the City of Gautier prior to the BP oil spill. It has since been torn down and suffered greatly as a result of the oil spill. The Gautier Town Center Project is located in Gautierâ€™s central business district. The Town Center is anchored by municipal buildings, commercial strip centers, MGCCC, and the mall project. Due to Gautier being situated along Highway 90 and being a â€œyoungâ€€ity, it has no downtown area. Furthermore, Gautier is home to a Waste Pro home office, and a transfer station is proposed along Beasley Road, which is a dead end road that currently provides the only ingress/egress for a landfill, Waste Pro, municipal buildings, residential neighborhoods and heavy commercial uses. Therefore, the Town Center Project includes a network of roadways to facilitate the new town center commercial development and provide a connector from Gautier-Vancleave Road to Beasley Road. The Gautier Town Center Project incorporates 0.5 miles of roadway and 1 mile of multi-use pathway to link together retail, residential and recreational areas. It will also provide the transportation infrastructure necessary to accommodate the industrial type development nearby. The City has approximately 33 acres of property immediately north of the Town Center. The City has leveraged funds from both Tidelands and the Coastal Impact Assistance Program to acquire the property necessary for the Commons Park and to provide initial transportation infrastructure, lighting, sidewalks and streetscape improvements for the planned project. The City is proposing to develop a large recreational area and public park in conjunction with the Commons Development. A great portion of the property consists of wetlands. Throughout these areas, nature trails will be constructed to permit public access throughout this pristine ecological area. Small pavilions and tree houses will be placed along these trails to provide resting areas and opportunities to view the wildlife. Educational plaques depicting the wildlife and various species of plant life will be strategically placed throughout the nature trails explaining the wildlife habitat and ecological area. The center portion of the park will consist of a Great Lawn and festival grounds that will be a focal point for large crowd gatherings. The City of Gautier has an annual Mullet and Music Festival, which is held in conjunction with Cruisinâ€™ the Coast.	Jackson	Yes	No	Yes	Yes	Yes	Yes	Yes	80	Yes		$ 15,000,000.00	$ -	
	Research and Education	5548	4/12/2017	The SBCF New Wave Center for Innovation and Technology	Small Business Capital Fund of MS, Inc., (SBCF) is a 501c3 US Department of the Treasury Community Development Financial Institution (CDFI) that specializes in finance programs and technical assistance for MS businesses and has done so since 1994. As an administrator of several MDA small business assistance programs since the 1990â€™s, SBCF is uniquely qualified to address at least five of the eight key areas of focus of the GoCoast 2020 goals as set forth by Governor Phil Bryant in 2012. SBCF is most fortunate, as well, to have the full support and endorsement of Governor Bryant and his office with the submission of this request, and thereafter, if selected. The key areas that SBCF would address include: Workforce and Economic Development, Small Business Assistance, Research and Education and Infrastructure. If afforded this opportunity, SBCF would collectively address these areas by designing/building and operating a facility that would provide both incubator and accelerator services to coastal area start-up and existing businesses. Through an expansive technical assistance platform, SBCF would provide entrepreneurs and business owners with innovation tools and strategies, targeted access and approaches to research and resources, access to certain industry specific training and certification programs such as the ISO/IEC 27000 family of standards for cyber security to protect their IT environment as well as ISO 9000 training and certification to help organizations to most effectively and efficiently fulfill the needs of both their internal and external audiences while meeting statutory and regulatory requirements. SBCF would also work with large employers by facilitating personal development, guided self-help, programs for their employees such as, â€œYour fiscal self affects your physical self. Learn how, why and what to do about it.â€ though designed to assist employees with tools and information to address and correct credit and financial issues, the employer ultimately benefits as it eliminates use of company time and distractions handling personal matters resulting in increased productivity, bottom line and overall company morale. As the majority of efforts would be centered on infrastructure, SBCF would enhance its offerings to prime and subcontractors, public and private agencies and organizations in construction and transportation-related industries as well as provide access to complementary or peripheral services such as bonding agents and professional service providers that cater to those industries. It is SBCFâ€™s desire to assist with rejuvenating the MS Gulf by providing a space that will make way for the next wave of business leaders, startups, entrepreneurs and forward-thinking companies to excel by linking the knowledge and experience of the past with the innovation and technology of the future. In short, our project is Gulf coast eco-gardening at its best!	Harrison,Jackson	Yes	No	Yes	No	Yes	No	Yes	60	Yes		$ 7,500,000.00	#######	

	Research and Education	5550	5/1/2017	Cherokee Urban Forestry Project Proposal	"Cherokee Estates is a neighborhood in Pascagoula, MS located immediately next to Bayou Cassotte and a lot of heavy industry. This includes a Chevron Refinery, First Chemical, MS Phosphates, Halter Marine, Etc. This creates a lot of air pollution and dust. The residents of Cherokee have complained to industry, EPA, MDEQ and the City of Pascagoula. One partial solution would be replanting a line of trees that were removed to widen a road. These tress were tall and dense enough to catch some of the noise, air pollution, and dust. The State of Mississippi, EPA, MDEQ, Jackson County and the City of Pascagoula would all like to see some improvement". Howard page, Steps Organization Need: Trees provide buffers from sound, air pollution, soil pollution, storm water run-off and trees have a large capacity to enhance property values and create quality places to live. This area is in dire need of a living buffer that offers eco-system services. This project will plant a tree buffer and be used as an educational tool to demonstrate how to use trees for the maximum benefits. This is an excellent location to demonstrate upland land management and how it can benefit downstream for healthier gulf habitats. This area is receiving a lot of public attention and provides an opportunity to demonstrate tree benefits and using trees to address upland watershed issues and how trees directly impact gulf health. We will combine planting trees with providing education in the community about the connections. This project will focus on how land owners, home and business owners can get involved in their community health by planting the right tree in the right place In this area we will inventory plantable spaces and plant the correct tree species for climate, soils and buffer benefits. Project: This project will be a challenge in that the development damage is significant enough to warrant a variety of practices with trees being a most beneficial aspect of redevelopment for this area. We will use areal maps, GIS for inventory of plantable spaces, develop a best species list for small, median and large trees and provide planting and tree maintenance workshops to residents plus invite the general public to attend the workshops. We will plant to majority of plantable spaces. Once the tree buffer has been established it will provide a model for generations to come and for new development to learn from as well. The tree buffer will consist of any public lands and private lands surrounding the issue. Private landowners will be offered trees for them to plant if adjacent to the project area. Deliverable: Deliverables will include a linear green space of trees serving as a buffer from pollution and storm water run-off. An education brochure will be developed to highlight the species and placement plus the eco services the trees provide. We will use the i-Tree program to calculate a	Jackson	Yes	No	No	No	No	Yes	No		No		$ 100,000.00	$ -	
	Research and Education	5553	5/15/2017	Buccaneer State Park Feasibility Study	The Mississippi Gulf Coast region has an opportunity for an economic development project combining nature and wildlife education with family entertainment. The proposed project location is Buccaneer State Park in Hancock County, and would create a public-private partnership between local and state governments and the Audubon Nature Institute. Buccaneer State Park, which is located on the Mississippi Gulf Coast in Waveland, was devastated by Hurricane Katrina in 2005, with all of the structures, waterpark and support facilities completely destroyed. Today, the Park has been beautifully restored. It is in a natural setting of large moss-draped oaks, marshlands and the Gulf of Mexico. The Park offers Buccaneer Bay, a 4.5 acre waterpark, Pirate's Alley Nature Trail, a playground, Jackson's Ridge Disc Golf, an activity building, a campstore, and Castaway Cove pool. There are 206 premium campsites with full amenities, including sewer, and an additional 70 campsites that are set on a grassy field overlooking the Gulf of Mexico. The Park is centrally located to major population centers in Mississippi, Alabama and Louisiana and state and federal highway systems. The Audubon Nature Institute has a successful track record and currently owns and/or operates several educational and family facilities. Partnering with the Institute provides an opportunity to develop Buccaneer State Park into a major ecotourism destination. A park of this magnitude will generate jobs and income for the Mississippi Gulf Coast communities. The park can enhance the existing entertainment choices such as the beaches, casinos, fishing/hunting, and shopping currently offered. This partnership will work to create a park experience unique to the State of Mississippi, and in particular the Mississippi Gulf Coast. To move forward with exploring this opportunity, the Audubon Nature Institute must first perform a feasibility study. This study, which would have stakeholder and public participation, would include an analysis of the park needs (such as recreational and educational attractions), an economic feasibility analysis, an impact assessment, and an implementation program.	Hancock	Yes	No	No	Yes	No	No	No		Yes		$ 400,000.00	$ -	
	Research and Education	5560	5/16/2017	Pascagoula River Scenic Trail	Water trails are marked routes on navigable waterways such as rivers, typically for people using small non-motorized boats, such as kayaks and canoes. Originally created by environmentalists and conversationalists to encourage environmental awareness, they have evolved to be recreational routes on waterways with a network of access points. The Pascagoula River is the largest by volume unimpeded river in the contiguous 48 states. This project will develop ecotourism opportunities by establishing and developing a scenic water trail along the Pascagoula River. This scenic water trail will bring sustainable rural development to communities along the river in Jackson County. As the Stateâ€™s first water trail, it will serve to strengthen and extend recreational opportunities for residents and visitors. Trailheads will be constructed in four strategic locations along the river. Each trailhead will provide amenities such as public boat and kayak launch, pavilions, parking for visitors, and a kiosk with a map of the area. Although new to the State of MS, water trails have been implemented in other states and studies have been conducted to measure their economic impacts. While dissimilar in their measurements and time frames for data collection, each report shows that water trails can increase paddle sports tourism and bring new money into local economies. The studies also explored social benefits to a community and found that water trail communities experienced lower poverty rates and higher education and health levels than communities that do not provide recreational activities. Increased tourism around water trails will bring additional tourism dollars to the community. The Pascagoula Water Trail will create tourism travel to Mississippi by being the first Water Trail in the state, strengthen Jackson Countyâ€™s tourism economy through travel on nearby waterways, grow recreational opportunities with promotion of the Pascagoula River and highlight the historic significance of the waterway. The proposed locations for the trailheads are as follows: -Northern Trailhead â€“ Cedar Creek area -Roy Cumbest Trailhead â€“ Wade Vancleave Road -Hickory Hills Trailhead â€“ Near Hickory Hills Golf Course -South Trailhead â€“ Located near Gautier at U.S. Highway 90	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	70	Yes		$ 3,000,000.00	$ -	

	Research and Education	5592	6/23/2017	Restoration in Place Strategy for the Deep-sea Soft-Bottom Benthos: Long-term Monitoring to Support Restoration Efforts	NOAA Project ID#13059: The Deepwater Horizon (DWH) incident in the northern Gulf of Mexico (GOM) occurred on April 20, 2010 at a water depth of 1525 meters, in Mississippi Canyon Block 252, releasing an estimated 3.19 million barrels of oil over the following 87 days. As part of the Natural Resource Damage Assessment (NRDA) process, a study comprising three field surveys (2010, 2011, and 2014) was conducted to identify effects of the spill on the deep-sea, soft-bottom benthos and sediment quality. Results revealed a zone of severe to moderate impacts on biodiversity linked to the DWH wellhead that persisted through 2014. Thus, an obvious restoration goal for the deep sea is to return biodiversity and other key benthic attributes to normal reference-range conditions. It is hypothesized that burial of the damaged habitat by natural deposition processes will cap the damaged sediment and restore the benthos to background conditions. The obvious question is: how much sediment is needed to cap the DWH contamination, and long will this take? Based on the NRDA studies, 95% of the benthos is within the top 10 cm of sediment. A recent examination of deep-sea sediments in the area of the 1979 Ixtoc spill, found 4 cm of fresh sediment on top of the damaged sediment. Using this rate, it is hypothesized that it will take another 65 years to have a total of 10 cm at the Ixtoc site, which implies it takes about 100 years for deep-sea sediments to recover naturally. Thus, the restoration strategy for deep-sea soft-bottom benthos must be a long-term study to monitor the recovery rate and verify that this assumption is correct. Now is the time to begin planning specific projects for the open ocean and deep-sea benthos, because the Damage Assessment and Program Restoration (DARP) report is complete and the Open Ocean Restoration activities are being developed. However, two challenges exist: (1) rates of change in the deep sea are very slow, and (2) we know very little about temporal dynamics in the deep sea Gulf of Mexico. Until we understand basic temporal dynamics, it will be difficult, if not impossible, to ascertain if change is a result of recovery, seasonal dynamics, or year-to-year variability. Thus, the proposed sampling strategy includes both a long-term monitoring strategy to measure recovery and a short-tem experiment to identify temporal dynamics. A third component of the strategy is to analyze archived samples of opportunity collected in 2015, 2016, and 2017 during Gulf of Mexico Research Initiative (GOMRI) funded cruises, where analyses of the benthic samples were not funded. The long-term monitoring study would include sampling 34 NRDA stations bi-annually (every 2 years) until recovery occurs (or for the length of the RESTORE program, which-ever occurs first). The 34 stations consist of 20 moderately and severely impacted sites, and 14 non-impacted sites. Spatial coverage across the treatment categories is necessary as a basis for comparing impacted versus non-impacted areas. The temporal dynamics experiment would entail quarterly sampling over two years at six stations. Quarterly sampling is necessary to identify if seasonality exists, and a two-year cycle is required to confirm that the patterns are repeatable. Three stations in the heavily impacted zone and three stations from non-impacted zone would		Yes	No	No	Yes	No	Yes	No		No		$ 52,000,000.00	$ -	
	Research and Education	5619	6/27/2017	Phase II Land Acquisition for expansion of Grand Bay NWR, NERR, Grand Bay Preserve, and Graveline Bay Preserve	This effort seeks to permanently protect lands identified by the US Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management at both Grand Bay and Graveline Bay. This project will add approximately 1,679 acres to the 20,000+ acres currently owned and managed by the USFWS and the State of Mississippi at Grand Bay and Graveline Bay. This acquisition will add critical coastal lands to the Grand Bay NWF/NERR/Preserve and the Graveline Bay Preserve for permanent protection and improved management of coastal wetlands, as well as important adjacent upland areas. The Grand Bay NWR/NERR protects one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The Graveline Bay parcels include several areas of true uplands that could be lost to residential or commercial development. The targeted 1,679 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt pannes, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay and Graveline Bay include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of protected lands at Grand Bay and Graveline Bay will also expand public recreational access, research, education, and training opportunities in this unique coastal environment.The Conservation Fund is in discussions with the landowner regarding acquisition of these tracts and anticipates that the project could be completed immediately, pending availability of funds.	Jackson	Yes	No	No	Yes	No	Yes	No		No		$ 4,905,000.00	$ -	Land Acquisition
	Research and Education	5631	7/6/2017	Designation of DeSoto and Mississippi Canyons as Marine Protected Areas	NOAA Project ID#13053: DeSoto and Mississippi Canyons provide important habitat for Brydeâ€™s whales and sperm whales, respectively, as well as for other oceanic marine mammals and deep-sea coral communities. The northern Gulf of Mexico stock of Brydeâ€™s whales inhabits DeSoto Canyon and adjacent continental slope waters extending east and south of the Canyon, and Brydeâ€™s whales are the only regularly occurring baleen whale in the Gulf (Rosel and Wilcox 2014, Rosel et al. 2016). The northern Gulf of Mexico stock of sperm whales also represent a distinct stock in the Gulf. Sperm whales are found throughout offshore waters of the Gulf, but the Mississippi Canyon represents an important feeding area (Jochens et al. 2008). Both species of large whales were impacted by the Deepwater Horizon (DWH) oil spill, with estimates of 17 percent of the Brydeâ€™s whale population killed and 6 percent of the sperm whale population killed (DWH MMIQT 2015). Mississippi Canyon was subject to intense and prolonged oiling below and at the surface during the spill (Stout et al. 2015). DeSoto Canyon was less heavily contaminated but also experienced oiling at the surface and seafloor (Brooks et al. 2015). Other marine mammals found regularly or occasionally in these areas include Atlantic spotted dolphins, Blainvilleâ€™s beaked whales, Cuvierâ€™s beaked whales, Gervaisâ€™ beaked whales, dwarf and pygmy sperm whales, oceanic and continental shelf stocks of bottlenose dolphins, pantropical spotted dolphins, Rissoâ€™s dolphins, rough-toothed dolphins, short-finned pilot whales, spinner dolphins, and striped dolphins (Waring et al. 2013). Less is known about the distribution of other oceanic marine mammals within these areas, such as Clymeneâ€™s dolphins, Fraserâ€™s dolphins, killer whales, false killer whales, melon-headed whales, and pygmy killer whales. The designation of marine protected areas was noted by the DWH Trustees as a mechanism for addressing key threats to mesophotic and deep benthic communities (PDARP/PEIS Secti on 5.5.13.3). However, no information was provided in the PDARP/PEIS on what specific areas in the Gulf the Trustees might be considering for such designation. The Commission believes that areas that provide protection for multiple species, including marine mammals, should be priorities for designation. Habitat density maps for sperm whales, Bryde's whales, and other marine mammal species that occur in these areas of the Gulf can be found at: http://seamap.env.duke.edu/models/Duke-EC-GOM-2015/ References: Brooks, G.R., et al. 2015. Sedimentation pulse in the NE Gulf of Mexico following the 2010 DWH blowout. PLoS ONE 10(7):e0132341. DWH MMIQT (Marine Mammal Injury Quantification Team). 2015. Models and analyses for the quantification of injury to Gulf of Mexico cetaceans from the Deepwater Horizon oil spill. DWH Marine Mammal NRDA Technical Working Group Report. Jochens, A., et al. 2008. Sperm whale seismic study in the Gulf of Mexico: Synthesis Report. Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana; OCS Study MMS 2008-006, 323 pp. Rosel, P.E., and L.A. Wilcox. 2014. Genetic evidence reveals a unique lineage of Brydeâ€™s whales in the northern Gulf of Mexico. Endangered Species Research 25:19â€“34. Rosel, P.E., et		Yes	No	No	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	5654	7/18/2017	Comprehensive stewardship of breeding waterbirds across barrier and nearshore islands in the Gulf (Alabama â€“ Texas)	NOAA Project ID#13314: Waterbirds were disproportionately injured during the Gulf oil spill in 2010, particularly on barrier and bay islands. We propose to restore some of the species, including Gull-billed, Least, Common, Caspian, Royal, and Sandwich Tern, Reddish Egret, Brown Pelican, American Oystercatcher, Snowy Plover, and Wilson's Plover. National Audubon Society and partners will increase production of birds, reduce mortality, and concomitantly restore and protect habitats on which injured species rely. We will use an adaptive management framework to assess threats, implement strategies to address those threats, monitor success, and adapt both within season where appropriate, and across seasons. We will work on the four key priorities for bird restoration outlined in the PDARP. Priority 1: Restore and conserve bird nesting and foraging habitat. Objectives: At key sites, implement stewardship activities to alleviate dominant threats and improve productivity. Activities: Direct protection of nesting colonies and solitary nesters Predator control Vegetation management Erosion control Outreach and education to increase community cooperation and acceptance Expected Outcomes: Increased productivity of injured birds Priority 2: Establish or re-establish breeding colonies Objectives: Attract colonial nesting species to new or restored islands Activities: Social attraction techniques, including use of decoys and playback of vocalizations Expected Outcomes: Increased number of nesting colonies of injured species Increased probability of region-wide population persistence Priority 3: Prevent incidental bird mortality Objectives: Reduce incidental mortality of coastal waterbirds of all species. Activities: Set up recycling for monofilament line. Educate fishers about dangers of entanglement and reduce barriers to recycling. Expected outcomes: Fishers have increased awareness and compliance with monofilament recycling. Bird mortality from entanglement in monofilament reduced Priority 4: Address relevant data gaps Objectives: Using the objectives hierarchy established by the Gulf of Mexico Avian Monitoring Network, develop monitoring to fill key knowledge gaps. Activities: Develop standardized protocols for monitoring bird populations and productivity Conduct studies to ascertain the effects of predators, habitat use, and sediment type on bird productivity Expected Outcomes: Improved understanding of Gulf-wide population dynamics Gain knowledge required to prioritize areas for restoration and to develop comprehensive management plans Benefits to Public: Improved management of birds nesting on bay and barrier islands will allow for better balance between species of birds, potentially reducing human-bird conflicts. Recent studies have linked the reduction in coastal birds, lead by the reduction in many of these species of waterbirds, to an explosion in populations of Menhaden, along with a decrease in oil content, quality, and economic value of this important prey species. Restoring balance to this ecosystem by restoring predatory birds will improve livelihoods for fishers and help restore fisheries. Restoring the species harmed during the spill will improve public perception of our coasts as ideal landscapes for living, working, and recreating. It will also improve access to recreation such as	Harrison County,Mobile County,Jefferson Parish,Terrebonne Parish,Galveston County,Calhoun County,Cameron County	Yes	No	No	No	No	Yes	No		No		$ 10,000,000.00	$ -	

	Research and Education	5659	7/19/2017	High Resolution Mapping of mesophotic Reefs in the Gulf of Mexico	NOAA Project ID#13330: Understanding the detailed quality, quantity and spatial distribution of marine habitats enhances our ability to manage human and natural resource activities to support sustainability, conduct restoration and maintain system function. Maps have a wide range of applications in management, planning, policy, research and restoration. Prior to DWH, map products, such as high resolution bathymetry and habitats were top priority for all Gulf of Mexico natural resource agencies in the Gulf of Mexico. This remains top priority after DWH. NOAA, led by NCCOS, and other federal and state partners will establish a habitat mapping prioritization and implementation plan. This proposal will fully leverage with the NOAA/USGS led Habitat and Water Quality monitoring network currently funded by the RESTORE Council. The plan involves three tiers: 1) develop a prioritization tool to target unmapped or poorly mapped areas in the Gulf of Mexico, 2) develop a standardized approach to map the identified targets and 3) implement mapping activities. Gaps in habitat data collection will be strategically identified and coordinated with regional state and federal mapping policies and master plans. Processes will be developed for mapping, assessment, and monitoring of numerous parameters describing the seafloor (e.g., depth, topography, and geomorphology), upstream, estuarine/coastal habitats, and associated benthic communities. While habitat mapping is a valuable stand-alone product, it is also a foundational platform upon which other research and management programs can be built. Additionally, it is expected that the oil and gas industry will significantly increase deep water exploration and the location and status of biological communities are poorly understood. Data tools and portals, such as NRDA DIVER and ERMA, developed in response to DWH are potentially being used for the phase 1 habitat/mapping synthesis. It is intended that the prioritization tool and new data will be used for st orage, query, dissemination and visualization. Additional tools will be customized for Deep Sea Coral habitat restoration, mitigation, and protected area siting. Date Entered: May 15, 2017		Yes	No	No	No	No	No	Yes		No		$ 5,000,000.00	#######	
	Research and Education	5662	7/21/2017	Mesophotic reef habitat enhancement.	NOAA Project ID#13339: The 2010 Deepwater Horizon (DWH) oil spill in the Gulf of Mexico (GOM) is one of the largest industrial accidents ever to occur in US waters. Extensive decontamination activities, fisheries closures, mobilization of environmental assessment resources, and restoration efforts also make this one of the most costly accidents in US history. The DWH oil spill impacted key deep-reef fish â€œsentinelâ€‰species, roughtongue bass, Pronotogrammus martinicensis, and tattler, Serranus phoebe, but almost nothing is known about possible long term effects and possible recovery. In addition there are several other important commercially and recreationally valuable species that were also affected (red snapper, vermilion snapper, greater amberjack, gag, and scamp) that reside on these deep water mesophotic reefs that are close (50 to 100 km) to the DWH spill site. The primary objectives of this project will be to enhance and restore deep water reef fishes by substantially increasing reef habitat through a large artificial reef deployment program, and provide a robust assessment of the effectiveness of this habitat enhancement effort. One of the most promising approaches to mitigate the reduction in reef fishes caused by the DWH oil spill event is to increase habitat for ecologically and commercially important reef fish species through an extensive and effective artificial reef program. Such habitat enhancement may also increase the resilience of these valuable resources to future disturbances. On the MS-AL continental shelf there has been an extensive artificial reef enhancement program that has been tremendously successful, but there have been few attempts at such enhancements of deeper water mesophotic reef habitats. This project will make a restore effort of such mesophotic reef habitats by adding an unprecedented number (504) of large-sized, long-lasting artificial reefs (â€œsuper-reefsâ€‰: 25 ft. tall pyramid reefs) to the Pinnacles reef zone in the northeast Gulf of Mexico adjacent to the DWH spill site. Artificial reef placement, particularly distance between reefs can have profound influence on the effectiveness of any given artificial reef program. Therefore the habitat enhancement of this project will be tightly coupled with quantification of the effects of reef spacing on a number of critical metrics including natural and fishing related mortality, condition, growth, abundance, biomass, production, diet, and movement of several important reef fish species (e.g., roughtongue bass, tattler, red snapper, vermilion snapper, greater amberjack, gag, and scamp) as well as community characteristics such as species richness, evenness, and diversity. This will be accomplished through application of a wide array of proven methods, each of which have been developed and optimized for this system by the Auburn University Marine Fish Lab over the last 26 years. Methods include standardized hook-and-line and trap sampling, ROV surveys, hydroacoustic surveys, fine-scale passive acoustic tracking, stomach content analysis with DNA barcoding, otolith aging techniques, genomic studies, parasitology and microbiology studies. These methods will provide a comprehensive combination of data on population and community characteristics, individual condition and growth, individual movement, and resource use,		Yes	No	No	No	No	Yes	Yes		No		$ 9,700,000.00	$ -	
	Research and Education	5663	7/21/2017	Restoration of Mesophotic and Deep Sea Reefs using novel method, and maximum cost efficiency	NOAA Project ID#13245: Deep sea and mesophotic reefs were negatively impacted by the DWH spill. Restoring populations of corals, and other important fish habitat structure-forming benthic fauna is a massive undertaking, given the geographic area to be restored in the deep sea. Reef restoration using coral transplants, artificial structures, or both has been attempted in tropical (shallow) reefs with limited success. Coral restoration in the deep sea, or mesophotic zones presents even greater challenges, and potential costs, because of the inaccessibility and equipment required to work in the 50-1,000 meter seafloor. In order to overcome these challenges, and maximize the potential impact of of restoration costs, new technologies need to be developed and implemented, from site selection and transplanting, to logistics, and monitoring. Coramyd is a patent pending technology that integrates artificial reef structures, which are non-toxic, and can replace hundreds, or even thousands of corals within a week of ship time. The artificial reef structures used in Coramyd are not prone to corrosion, and can provide means of deploying coral transplants efficiently and successfully in large numbers. Structures are resistant to currents, and are less likely to snag fishing gear than other artificial reef structures. Structures are seeded with coral transplants, and are lowered to the seafloor using a small crane. Project scope is limited to restoration of populations of corals which were impacted by DWH spill over areas with specially sensitive and valuable fish populations. Please contact for more details and methods. Date Entered: May 15, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 3,260,000.00	$ -	
	Research and Education	5676	7/24/2017	Deer Island IV, Habitat Restoration Project, Deer Island Multi Asset Restoration Project Area	NOAA Project ID#13140: >>Overview: The goal of this project is to offset Mississippiâ€™s ongoing 200acre/yr. coastal habitat losses. The objective is to extend current assets of Deer Island eastward onto the â€œLittle Deer Islandâ€‰shoal to protect coastal communities, estuarine function, ecologically/commercially important species and overall esthetic, habitat and recreation values. These assets, which include island habitats, linear sand borrow area and the Katrina Key artificial reef,currently work in concert to increase resiliency of the overall resource. According to NOAA charts, â€œLittle Deerâ€‰shoal covers over 3000 acres at minus 3 feet. This NOAA Chart data will be updated with via new bathymetric survey so that restoration concepts can be refined enough to begin public outreach prior to beginning a permit application process. >>Setting: Deer Island is the larger of Mississippi's two "mainland remnant" islands. Unlike the sand barriers of the Gulf Islands National Seashore several miles to the south, both Deer Island and Round Island (about 15 miles to the west) are stable structures that have responded to sea level rise with consistent erosional losses. Deer Island measured over 800 acres in 1850 and had shrunk to about 400 acres prior to the initiation of restoration efforts 2001. >>Project background: Since 2001, the USACE Mobile District and MDMR have worked collaboratively on Deer Island to restore the footprint to approx. 770 acres. However, a significant restoration opportunity for Deer Island has yet to be initiated. A large sand shoal (â€œLittle Deerâ€‰shoal) extends eastward of the current island. This area still had emergent land until a couple of decades ago and based upon local historic sea level rise rates, measured 1000 acres or more within the last 500 years. This lost habitat can be readily restored as a result of Mississippi's restoration experience and success in this type of setting. The State of Mississippi has extensive success with restoration in this shallow shoal setting recently completing 220 acres of new island and marsh habitat on a similar shoal north of Round Island. Funded by NFWF, this project captured 3.3 million cubic yards of high quality, new-cut dredged material that was otherwise destined for ocean disposal. Also, two 40 acre beneficial use / marsh restoration projects established along the northeast shore of Deer Island are nearing completion. >>Project Detail: (1) Depending upon public/agency/scientific/technical consensus- Build approximately 300 to 1000 acres of new emergent coastal habitat(island) with a similar distribution of habitats and elevations to that currently extant on Deer Island. This includes relic beach dunes, coastal maritime and savanna forest, coastal scrub-shrub, tidal flats and marshes, etc. This emergent portion may incorporate some beneficial use of dredged material in order to obtain optimum material for marsh creation. (2) Include up to a 12,000 foot extension of the Katrina Key artificialreef which is currently about 4,000 feet long and visible about 4,000 feet southwest of eastern Deer Island (visible on the project map in this submittal -blue marker). (3) Extend the parallel linear sand borrow area used for the initial MsCIP project in 2011 (also visible in this submittal- blue marker) eastward to provide optimal sand quality for the emergent portion of the	Jackson County	Yes	No	No	No	No	Yes	No		No		$ 50,000,000.00	$ -	

	Research and Education	5735	8/16/2017	Marine Mammal Conservation Print Ads in Tourism & Trade Magazines	NOAA Project ID#13575: Print ads in tourism magazines can sometimes be effective in reaching large audiences with the desire to interact with marine mammal in the wild. Unfortunately, magazines offering discounted or probono ad space usually means small ads in the back of a magazine that will most likely be overlooked. This project includes funding a contract with a marketing agency to produce and coordinate full or half page color ads with premium locations within the tourism and trade magazine that are widely distributed throughout Texas, Louisiana, Mississippi, Alabama, and Florida. Large colorful ads would attract readers and ensure these important messages are conveyed to target audiences. By choosing tourism and specific trade magazines to reach target audiences, this project will: - Reduce injury and mortality to bottlenose dolphins from hook-and-line fishing gear by educating fisherman about ways to avoid interactions with dolphins while fishing and provide them with Dolphin Friendly Fishing Tips. - Increase bottlenose dolphin survival though better understanding of cause of illness and death as well as early detection and intervention of anthropogenic and natural threats because this audience would know how to help a stranded, injured or entangled marine mammal and to report these animals to the appropriate stranding network immediately. - Reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because audiences will better understand the harm and consequence of these activities. They will learn how to recognize dolphin behaviors that are signs of harassment and also how to responsibly view dolphins in the wild. - Reduce injury and mortality of marine mammals from vessel collisions by educating mariners about marine mammal viewing guidelines and precautions they can take to avoid vessel strikes. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 500,000.00	$ -	
	Research and Education	5736	8/16/2017	Protect Wild Dolphin Billboards	NOAA Project ID#13574: This project will reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because residents and visitors would become aware that these activities are harmful and illegal. Billboards would be used to reach large audiences with important educational messages on highly traveled roads taken by residents and visitors to coastal areas throughout Texas, Louisiana, Mississippi, Alabama, and Florida. Billboard advertisements have the largest impact on the greatest number of people and are the most cost effective method for reaching target audiences. This project includes design, print, install, and rent for media space for billboards. Billboard would convey brief but important educational messages and images about the harm in illegally feeding and harassing wild dolphins. Locations of 20 billboards will be determined by traffic patterns and distance to popular coastal area where illegal feeding and harassment has been known to occur. Billboards will be maintained in these 20 locations for 2 years to ensure constant and consistent educational messaging in a cost effective manner. Date Entered: May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 530,000.00	$ -	
	Research and Education	5738	8/16/2017	Marine Mammal Aerial Outreach Banners	NOAA Project ID#13571: The use of aerial banners (small plane pulling long banner) to relay important educational messages to target audiences has proven an effective outreach tool; banners can be used to educate beach-goers and motorized & non-motorized (jet skis, surfers, paddle boarders, etc.) vessel operators about presence of marine mammals and laws protecting them in the Southeast U.S. This project will reduce injury, harm, and mortality to bottlenose dolphins by reducing illegal feeding and harassment activities because target audiences will become aware that these activities are harmful and illegal. The project may also reduce injury and mortality of marine mammals from vessel collisions by making vessel operators aware of the presence of whales and way to avoid vessels strikes. A banner with the message "Donâ€™t Feed Wild Dolphins, Itâ€™s Illegal" has been flown over areas where this harmful and illegal dolphin interaction is known to occur but also in areas where there are large numbers of tourist. These banners have reached over 300,000 people during one flight alone; this is common during spring break and other peak seasons. Banners have also been used when whales are seen close to shore and in areas where there are large numbers of motorized or non-motorized vessels near whales; the banners have made vessel operators aware of the presence of the whale(s) to avoid vessel strikes and harassment. This project involves flying aerial outreach banners in 10 coastal areas throughout Texas, Louisiana, Mississippi, Alabama, and Florida where illegal feeding and harassment activities are known to occur. The customized banners will educate people below to make them aware that these activities are harmful and illegal. Banners will be flown on 10 days each year per location; season, historic tourism numbers, and events will be considered when choosing which days the banners are flown. Banners would also be flown at times when other marine mammals (ie. orcas, Brydeâ€™s whales) are seen w ithin practical flight distance from shore and in areas where vessels are near to inform those vessel operators of the presence of whales and tips on how to avoid them. May 22, 2017		Yes	No	No	No	No	Yes	Yes		No		$ 180,000.00	$ -	
	Research and Education	5747	8/17/2017	High Resolution Multibeam Mapping and Groundtruthing of mesophotic and deepwater corals in northern GOM	NOAA Project ID#13683: Multibeam mapping and groundtruthing of seafloor features are critical steps in understanding and protecting biological resources in the marine habitat. These data are crucial for managers and agencies to take steps to delineate areas for protection. Federal Agencies and partners, primarily National Marine Fisheries Service, Gulf of Mexico Fisheries Management Service, Bureau of Ocean Energy Management, and National Marine Sanctuaries will utilize these data for future management actions. Potential sanctuary expansion boundaries, habitat maps, assessment of HAPC and BOEMs No-Activity Zones are examples of uses of these high resolution products. While the FGBNMS has invested extensive resources over the last 20 years to map and groundtruth locations in the northwestern Gulf of Mexico, there are significant mesophotic and deepwater coral sites in the northern Gulf of Mexico lacking in multibeam coverage, and subsequent groundtruthing. As part of the groundtruthing activities, there is a need to define high density coral coverage for different depths â€“ this term is used consistently in management and science applications, but is rarely defined. In regards to this, it will be valuable to have knowledgeable experts in the areas of spatial applications, and general familiarity with the biology in these depth ranges. There may be a need to develop this capacity. The DWH NRDA trustees should consider partnering in and providing funding support to obtain full coverage of multibeam bathymetry of areas of interest, as well as support to conduct groundtruthing surveys to discern the biological resources within these areas, including defining "high density" terminology, and developing expertise capacity for key biology. These areas include the full extent of the areas encompassed by the five alternatives evaluated in the 2016 DEIS for sanctuary expansion of the FGBNMS, the full extent of the areas considered by the Gulf of Mexico Fishery Management Council for potential de signation of deep coral HAPCs, and the full extent of BOEM No Activity Zones, related buffer zones, and lease blocks, topographic features, or seismic anomalies identified in various OCS leasing stipulations as triggers for biological review and setback. Date Entered: May 22,2017 Date Edited: May 23,2017		Yes	No	No	No	No	Yes	Yes		No		$ 5,000,000.00	$ -	
	Research and Education	5750	10/16/2017	MDMR Remote Setting Facility	The oyster industry is an integral part of the Mississippi Gulf Coast â€“ its economy, its history and its culture. The oyster industry has suffered greatly because of several natural and man-made disasters since 2005, including Hurricane Katrina, the BP Oil Spill and three separate openings of the Bonnet Carre Spillway (2008, 2011 and 2016). In 2004, oyster fishermen in Mississippi harvested nearly 500,000 sacks of oysters. In 2012, there were no sacks harvested, and in 2016, about 40,000 sacks were harvested. Gov. Phil Bryant created the Governorâ€™s Oyster Council on Restoration and Resiliency in 2015 to address the problems this industry faces and to come up with solutions. One of those solutions is a remote setting facility. The Mississippi Department of Marine Resources (MDMR) is proposing to construct, operate, and maintain a large-scale remote setting facility at the Port of Gulfport. This facility would assist in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast. The proposed funding would allow for the planning, construction, operations, and monitoring activities that will be conducted to evaluate and document restoration effectiveness. If awarded, the MDMR has the resources, procedures and personnel to implement,MDM manage and operate a large-scale remote set operation to help increase the production of the natural reefs. The proposed facility would allow MDMR to increase the amount of spat (oyster larvae after it attaches on cultch material) introduced into the MS Sound and monitor the health and growth of those oysters. Remote setting is a method of producing oysters that differs from natural oyster production. Remote setting is the production of oyster spat by setting hatchery-reared larvae onto cultch (hard material for oyster larvae to attach usually shell, crushed concrete or limestone) at a remote location from the hatchery; spat are then planted on-bottom or off-bottom. Remote setting has been successfully implemented for the production of oysters along the Pacific coast and the Chesapeake Bay areas of the United States. Remote setting was developed in the Pacific in response to low natural oyster production as a result of over harvesting, pollution, siltation, disease and predation (Jones and Jones 1983, Henderson 1983). Initially, the Pacific coast oyster industry depended on imported seed, which became an unreliable source; however, with the development of hatcheries along the Pacific coast, remote setting continued to develop and thrived (Henderson 1983). In the Chesapeake Bay Area, remote setting developed in an effort to increase oyster production and to utilize disease-resistant larvae produced by hatcheries (Congrove et al. 2009). In Mississippi, the oyster industry relies primarily on planting cultch and naturally produced oyster larvae (wild larvae) to set on the material to produce market oysters. According to the â€œStrategic Framework for Oyster Restoration Activities,â€Oyster reefs provide a broad variety of ecosystem	Harrison	Yes	Yes	No	No	Yes	Yes	No		Yes		$ 9,360,000.00	$ -	

	Research and Education	5767	2/25/2018	Seafood Traceability and Tagging Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Seafood Traceability and Tagging Program. This program would provide an electronic platform (i.e.; smart phone, tablet, and computer) and physical tags for commercial fishermen to improve domestic seafood traceability and help to eliminate fraud in the seafood industry. The need for this program arises from the prevalence of illegal and unreported seafood sales that undercurrent honest and legal seafood harvesters and businesses. This program would provide electronic reporting and tagging capabilities for commercially harvested marine species such as speckled trout, red fish, flounder, shrimp, blue crabs, and oysters. Similar programs have been implemented in federal fisheries with great success. In addition to eliminating fraud in the local seafood marketplace; this program would help promote domestically caught seafood and provide a story to the who, how, and when the seafood was caught. This program would also help to increase the value of Mississippiâ€™s commercially harvested seafood. Funds would be used to create a smart phone reporting application and purchase physical tags. Funds would also be required to employ managers of the program and conduct outreach to fishermen. An incentive base program is suggested to encourage participation in the program.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	No	No		Yes		$ 1,000,000.00	#######	
	Research and Education	5768	2/25/2018	Off-Bottom Oyster Aquaculture Advancement & Investment Program	The Mississippi Commercial Fisheries United, Inc. proposes for funding a Mississippi Off-Bottom Oyster Aquaculture Advancement & Investment Program. Off-bottom oyster aquaculture has been proven successful in surrounding states and is currently pending permit approval in Mississippi territorial waters. This program would help establish a cooperative for potential off-bottom oyster farmers and investment capital to help jump start the off-bottom oyster aquaculture industry in Mississippi. The program would also help to increase Mississippi overall oyster production and provide stimulus to Mississippiâ€™s coastal economy. Currently, obtaining sufficient investment capital is a barrier to entry in the off-bottom oyster aquaculture industry. Preliminary estimates place the cost of entry into the industry at about $50,000 per acre. The program proposed would give traditional oyster harvesters and oyster industry members priority to access funds that could be used to establish private off-bottom oyster farms.	Hancock,Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes		$ 10,000,000.00	$ -	
	Research and Education	5774	2/25/2018	Marine Debris and Derelict Trap Removal Incentive Program	The Mississippi Commercial Fisheries United, Inc. proposes the Mississippi Derelict Marine Debris and Trap Removal Incentive Program. Similar programs have proven to be successful in removing marine debris and derelict crab traps throughout the Mississippi Sound. The difference in this program and previous program is that this program proposes to utilize both commercial trappers and commercial shrimpers to remove and properly dispose of marine debris and derelict crab/ lobster traps. Commercial shrimpers often encounter derelict crab traps in the inshore waters of the Mississippi Sound and lobster/ lionfish traps in the Gulf of Mexico. Marine debris is ongoing probably annually due to tropical storms and hurricanes. This program seeks to incentivize the proper disposal of marine debris and derelict traps that are incidentally caught to help reduce the overall mass of marine debris in the Gulf of Mexico and coastal waters. Additionally, trap fishermen would be engaged to help identify locations of derelict traps and also to help retrieve derelict trap or marine debris. A nominal stipend would be paid to legally licensed commercial fishermen participants to participate in the program. The program would also request fund to establish disposal sites (i.e.: dumpsters and fenced areas) at a locations that are convenient for the removal of marine debris and derelict traps.	Hancock,Jackson,Harrison	Yes	Yes	No	No	No	Yes	Yes		Yes		$ 2,000,000.00	$ -	
	Research and Education	5779	4/16/2018	Marketing Mississippi Seafood	The MS Department of Marine Resources is required by state statute to market seafood caught in the Gulf of Mexico and the Mississippi Sound. The agency's primary responsibility is to promote the sale and use of wild-caught Gulf seafood to consumers, dealers, processors and restaurant owners/chefs. MS Seafood is a program within the Department of Marine Resources and reaches out to various user groups in a variety of ways. The program sponsors seafood festivals, cooking events and contests in order to educate the public and users of the importance of purchasing, selling and consuming wild-caught Gulf seafood. These events are held throughout the state of Mississippi and in the Southeast region. When consumers buy local seafood, it benefits our fishermen, seafood dealers and processors, which is beneficial to our local and state economies. With this grant, MDMR is proposing to use $100,000 each year for three years in order to achieve its goal of educating all groups about the benefits of using local seafood. The agency will achieve this through sponsorships and events that educate the public about the importance of buying wild-caught Gulf seafood.	Harrison	Yes	Yes	No	No	No	No	No		Yes		$ 300,000.00	$ -	
	Research and Education	5780	5/21/2018	Ocean Springs High School Aquaculture Expansion	This project will be based on the addition of two fully equipped greenhouses at Ocean Springs High school. By adding these new greenhouses, Ocean Spring High School (OSHS) will be able to increase the number of students who take aquaculture classes at OSHS, and it will also successfully maintain the program for 3-4 years. This past year, 89 students signed up to take Aquaculture. At the current size, full capacity is 36 students (18 per class) and 18 students for aquaculture 2 classes. The addition of two new greenhouses would give each class its own building. This would increase class sizes from 18 students to 25 students in each class for a total of 75 students per year. These students will be trained and graduate with work force skills in aquaculture, water quality, and any marine fisheries job that may become available. The program also focuses on eco-restoration. In the past, the program has raised, oysters, blue crabs, speckled trout, tilapia and striped bass. The oysters, blue crabs and speckled trout were released in the Mississippi Sound. With the addition of the greenhouses, other species will be evaluated to be included in the program. The greenhouses are also used in collaboration with kindergarten and fourth grade students as they come to the high school and learn systems with planting and raising fish. Students then grow these plants in smaller greenhouses and eat what is grown. In addition to these greenhouses, a smaller greenhouse will be opened to the special education department. This greenhouse will be used by their students to grow vegetables and other resources to use in their classes.	Jackson	Yes	Yes	No	No	Yes	Yes	Yes	17	No		$ 290,000.00	$ -	
	Research and Education	5788	7/11/2018	Cedar Lake Island Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. These parcels consist of approximately 6 acres of forested shrub wetland, and 2.89 acres of estuarine and marine wetland habitat that borders both sides of the Tchoutacabouffa River. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. LTMCP protects and manages 49.71 acres adjacent to the Cedar Lake Island Land Protection project. Ecological Value: Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands.-Protects areas that provide clean water for our natural resources further down the watershed. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as birdwatching and other wildlife observation, fishing, and kayaking. -Creates open spaces that provide areas for people to witness and learn about their natural environment. -Aids in creating a continuous corridor along the Tchoutacabouffa River	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5790	7/11/2018	Tchoutacabouffa River Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. This parcel consists of approximately 26.8 acres of freshwater forested wetland, 1.35 acres freshwater pond, 5.24 acres of riverine habitat, and 6.6 acres of forested evergreen upland habitat. Bayou Costapia and Tuxachanie Creek meet the Tchoutacabouffa River at this parcel. Also, LTMCP manages and protects a total of 206 acres directly adjacent to this property along the Tchoutacabouffa River including the Tchoutacabouffa Nature Preserve. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi sound. With the acquisition of this parcel, LTMCP would create a corridor of conservation lands 2.1 miles long along the Tchoutacabouffa River. Ecological Value: Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources further down the watershed. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Opportunities for low impact recreational activities such as birdwatching and other wildlife observation, fishing, and kayaking -Creates open spaces that provide areas for people to witness and learn about their natural environment. -Creates a corridor 2.1 miles long along the Tchoutacabouffa River.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition

	Research and Education	5796	8/6/2018	Phase 2 Land Acquisition for expansion of Grand Bay National Wildlife Refuge and National Estuarine Research Reserve	This effort seeks to permanently protect lands identified by the U. S. Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management by the Grand Bay National Wildlife Refuge (NWR) and Grand Bay National Estuarine Research Reserve (NERR). This project will add approximately 1,686 acres to the nearly 18,000 acres currently owned by the U.S. Fish and Wildlife Service and the State of Mississippi. It will add critical coastal lands to the Grand Bay NWR/ NERR for permanent protection, and improved management of coastal wetlands, and adjacent upland areas. The Grand Bay NWR/NERR protect one of the last expanses of wet pine savanna habitat in the country. Due to fire suppression and conversion to pine plantation, less than 5% of the original acreage of this habitat system remains- making it one of the most endangered ecosystems in the country. Because of the great biological significance of this area, it is important to continue to expand the protection of both core and buffer areas, while enhancing management capabilities. The targeted 1,686 +/- acres consists of wet pine savanna, maritime forest, tidal and non-tidal wetlands, salt marshes, salt pannes, bays and bayous. Federally threatened and endangered species that occur at the Grand Bay Refuge/ NERR include the gopher tortoise, sandhill crane, and the manatee. Also, a number of migratory species utilize the habitats provided on this acreage for portions of the life cycle; including Ibis, Martins and Swallows, Rails, Plovers, Sandpipers and Phalaropes, and Gulls and Terns, along with many different neo-tropical species. This acreage also provides salt marsh/ estuarine habitats for many aquatic species occurring in the Gulf of Mexico. In addition to protecting critical habitat and ecosystems, expanding the footprint of the Grand Bay NWR/NERR will also expand public recreational access, research, education, and training opportunities in this unique coastal environment. The Conservation Fund has initiated due diligence with financial assistance from the Knobloch Family Foundation, is in discussions with the landowner regarding acquisition of these tracts, and anticipates that the project could be completed immediately, pending availability of funds.	Jackson, Mobile	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5798	8/6/2018	Connecting and Extending Conservation Corridors in Coastal Counties	The Land Trust for the Mississippi Coastal Plain (LTMCP) is a nationally accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological significance in Hancock, Harrison, Jackson, George, Stone, and Pearl River Counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools to target priority conservation lands for the benefit of coastal Mississippi habitats, species, and recreation. The goal of this project is to provide funding to purchase individual parcels of land, which may be relatively small in acreage but are located in areas that have been identified as crucial to extending corridors of existing conservation lands. The Land Trust has identified several sites that would expand key conservation corridors presently owned by LTMCP, the Mississippi Secretary of Stateâ€™s Office, as well as the Mississippi Department for Marine Resources. These sites can be found on the Mississippi Department of Environmental Qualityâ€™s portal (www.restore.ms): project numbers 5436 Brickyard Bayou Land Protection, adjacent to the Pascagoula River Coastal Preserves owned by MDMR; 5788 Cedar Lake Island Land Protection, adjacent to the LTMCP Cedar Lake Island Preserve; and 5790 Tchoutacabouffa River Land Protection, adjacent to LTMCP Tchoutacabouffa Nature Preserve. Protection of these upstream lands is vital to the water quality and erosion control downriver and into the Mississippi Sound. Ecological Value: -Contributes to continuous corridors of conservation land. -Provides valuable habitat for a wide variety of native plants and wildlife, as well as migratory birds. -Protects upstream areas that support clean water. -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. -Provides a natural function of turnover and flushing of coastal wetlands. -Provides opportunities for educational, low impact recreational activities such as birdwatching and other wildlife observation.	Jackson,Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5800	8/9/2018	Kittiwake Coastal Conservation Area	Kittiwake Conservation has been able to identify some acreage in Pass Christian that appears suitable for coastal preservation. This property was partially used as part of the Camp Kittiwake, a church camp used into the 1950â€™s, then partially developed as a residential subdivision, Kittiwake, and for the Kittiwake Baptist Church. The remaining 12 acres has laid fallow for the past 50 years. Our neighborhood group, loosely organized as Kittiwake Conservation, see the area being retained for its natural features; its vegetation and wildlife, while adjacent to the sand beach. The area presents itself as an area where local runoff can be filtered naturally prior to reaching the Sound, reducing the number of beach closures in the area after heavy rainfall. Presently, the acreage is semi-wetland forest, and the home to herons, eagles, osprey, fox, bobcat, racoon, armadillo and rabbits. This property (11.8 acres) was recently purchased by an individual in 2017, and has expressed some interest in allowing the acreage to be used as a park, a wildlife preserve, a conservation area, and appears willing to part with the land for such uses. Across US 90 is the sand beach. This area has often been "closed" due to high bacterial count, particularly after heavy rainfall. This tract of land could be used to develop a series of â€œswalesâ€ to naturally filter the surface water of sediment and pollutants prior to reaching the Sound, and some existing underground water routes could be rerouted into the same system of swales. There are few intact land parcels available along Beach Boulevard that have not been through development, especially over the past 50 years. This is a parcel that has been neglected and allowed to become its own wildland. With minimal development it could become its own show piece of what upland areas would have looked like prior to significant development. A trail meandering through from Second Street to Beach Boulevard might be the extent of developing the area. A parking area on each end would allow the visitor to enjoy the woodland. School groups could grasp an earlier time. This woodland/park can be used as an outdoor school site exploring natural habitats, bird watching and learning about the natural filtering systems. These are just a few ideas for school, civic, scouting and tourist groups. Aside from the direct expense of acquiring the parcel, creating a parking area, a trail, trail signage, and a perimeter fence, would be the minimal expense. An architectural plan to enhance the site, creating a natural filtration system, or redirecting current drainage lines would increase the cost factor quickly. Would the City of Pass Christian take up maintenance, or the County Sand Beach Commission, or some other entity is unknown? This project could be combined with similar coastal projects nearby.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 3,000,000.00	$ -	Land Acquisition
	Research and Education	5810	8/10/2018	Restoration of Piping Plover and other overwintering shorebirds through reductions in anthropogenic stressors	NOAA Project ID# 13873: The impact of habitat loss on shorebirds may be exacerbated by disturbance from human recreational use, which further reduces the amount of coastal habitat that is functionally available. This can have consequences for the condition of individual birds or for population processes, both of which should be considered in strategies to reduce conflict between shorebirds and recreational users of coastal habitat. Our objectives were to implement measures to mitigate the negative impacts from human recreational use, coastal habitat modifications to Piping Plover (Charadrius melodus) body condition and demography. Also applies to additional overwintering bird species. The condition of these overwintering species may influence reproductive output, through cross-seasonal effects and areas that are heavily disturbed can result in reduced reproductive output from affected individuals (Gibson et al. 2018). July 31, 2018		Yes	No	No	No	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5818	8/10/2018	Trees Please Gulfport: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5822	8/10/2018	Trees Please Biloxi: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, Biloxi Bay, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Harrison,Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	

	Research and Education	5824	8/10/2018	Trees Please Pascagoula: Urban Forest for Clean Waters	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, Pascagoula River, and the Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Jackson	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5829	8/10/2018	Trees Please Bay St. Louis	In undeveloped areas of the coast, rain is intercepted by trees and the rest soaks into the ground, filtering out pollution. But on the developed coast, buildings, parking lots, roads, and other impervious surfaces, trees and soil no longer slow the rainfall and filter the water. The resulting stormwater instead picks up nitrogen and phosphorus pollutants. It flows rapidly into bayous, beaches, St. Louis Bay, and Mississippi Sound via storm drains. The results include beach closures, oyster contamination, and fish kills. This project would increase urban forestry--trees and soil--in the city landscape. Trees and soil decrease polluted stormwater runoff (including oil, pet waste, and fertilizer). This increases water quality for recreation, oysters, and fish on the Mississippi Gulf Coast.	Hancock, Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	
	Research and Education	5845	8/13/2018	Cat Island Visitor Access Facilities	NOAA Project ID#13894: Visitor access to the NPS part of Cat Island along the north shore is difficult. The water is very shallow and boaters have to anchor their boat offshore and walk in to the shoreline; this is both an inconvenience to visitors and injurious to the nearshore benthos (from boat hull and propeller scars and also footprints). Once onshore, there are no established trails or interpretive wayside exhibits. This project would: 1) construct a 600-ft-long pier adjacent to a previous WWII military pier site at Cat Island to provide vessel access to the north shore of the island (the pier is accessible by an old military road that connects to an interior road system maintained by the park service); 2) docking facilities at the end of the pier; 3) and a shade shelter/pavilion, waysides, regulatory signage and interpretative/educational panels interpreting the historic use of Cat Island as a military dog training camp. Date: Aug 8, 2018	Harrison County	Yes	No	No	No	No	No	Yes		No		$ 3,650,000.00	$ -	
	Research and Education	5850	9/7/2018	BSL Downtown Amphitheater	The City of Bay Saint Louis would be an ideal location for an open-air amphitheater. The venue could be used for entertainment, musical performances, and local festivals. The amphitheater could also be utilized by city schools and local community organizations. An amphitheater in downtown Bay Saint Louis would be an asset and an economic benefit for the whole community.	Hancock	Yes	No	No	Yes	No	No	Yes		Yes		$ 2,000,000.00	$ -	
	Research and Education	5855	10/25/2018	William Carey University College of Osteopathic Medicine at Tradition	William Carey University is a private, non-profit university with an in-depth history in the State of Mississippi, dating back to 1892. William Carey University (William Carey) provides quality educational programs, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society. William Carey currently has campus locations in Hattiesburg, MS, the Tradition Medical City in Tradition, MS and in Baton Rouge, LA. William Carey has a vast amount of educational offerings that can be found in the following colleges and schools: College of Health Sciences, College of Osteopathic Medicine at Hattiesburg Campus, School of Arts and Letters, School of Business, School of Education, School of Music and Ministry Studies, School of Natural and Behavioral Science, School of Nursing, and School of Pharmacy. William Careyâ€™s Tradition Campus, which opened in the fall of 2009, offers majors in art, business administration, elementary education, health related professions, nursing, and psychology. The University has recently reached a significant milestone with its School of Pharmacyâ€™s completed construction and its inaugural class of 57 students admittance this past July, with the capacity of 192 students and the creation of 34 new full-time equivalent jobs. The School of Pharmacy offers a three-year accelerated Doctor of Pharmacy program with an innovative curriculum that provides students with the knowledge and skillset required to excel as an entry-level practitioner. William Careyâ€™s School of Pharmacy is determined to make a difference in the lives of those who suffer from health issues such as diabetes, obesity, drug and tobacco addiction and asthma. In the spring of 2018, Southern Mississippi Planning and Development District commissioned Arduin, Laffer, and Moore Econometrics and The University of Southern Mississippi to study the economic impact of a future healthcare cluster with the Tradition Medical City at the nexus; this study was published as â€œThe Socioeconomic Impact of a Healthcare Research Cluster at Tradition, Mississippiâ€? Based on the proven theory that a cluster of healthcare and bioscience facilities in proximity to one another will accelerate innovation, this intellectual hub will serve as a catalyst for medical industry growth, residential development and serve as a primary destination for hospitals, universities, research institutions and health and life science companies. The economic impact study measured the potential for the future growth of William Carey University and Tradition based around the success of other existing business and industry clusters at Lake Nona, Florida, and Research Triangle Park in North Carolina. Based on these findings, the continued growth of William Carey and Tradition will make the Mississippi Gulf Coast a global destination for healthcare, research and medical education while creating an economic development and job creation engine for the region and the state.	Harrison	Yes	No	No	No	Yes	No	Yes	83	Yes		$ 60,000,000.00	$ -	
	Research and Education	5864	12/14/2018	Pearl River County Open Broadband Fiber Internet	Objectives - Pearl River County Open Broadband Fiber Internet is an exploration of the economics and methods of providing open access high-speed broadband fiberoptic internet access to all of the county. Open access provides the fiberoptic infrastructure while providing equal access to internet service providers to service their customers. Fiberoptic infrastructure installations are essentially infinitely wide thus only the electronics limit the speeds provided to the customers. There is little to no competition for affordable high-speed internet in the county if it is available at all. What is available is either low speed or unaffordable for the majority of the residents. Broadband is not an ordinary product. It is essential infrastructure â€“ the platform on which most commerce now depends. It has high start-up costs that take years to recover. When telecommunications prices are too expensive or speed too slow and unreliable, all businesses and residents suffer. Much like towns bypassed by canals, rails, or highways, future prospects are bleak for communities without adequate access to the Internet. Communities that do not invest in their own next-generation networks will likely not see any significant broadband investment in the near future. Benefits - Benefits include encouraging economic development, increasing access to education, and improving the quality of life. Many of the benefits are indirect, or spillover effects in economic terms. Lower prices for telecommunications services mean more money in household and business budgets, and new jobs and business expansions mean increased tax revenue for local governments. These benefits to the community result in no direct benefit to the network owner, which is why private companies like Spectrum and AT&T have less incentive to invest at this level. This projectâ€™s mission allows it to incorporate indirect benefits to the community when evaluating its return on investment. A private company evaluates its success in some respects based on the amount of money that flows from the host community to distant investors, a public network maximizes the money left in the community. Activities â€“ Grant funds will be used for forming a board of directors, consulting with the various advocacy organizations, obtaining legal advice, attending trade shows to evaluate vendors, providing accounting, and various ancillary expenses. Expected Outcomes â€“ The business plan will be the ultimate goal of this project. It will determine the budget, sources for funding, methods and routes for fiber installation, and organizational structure. The expectation is that the recent population	Pearl River County	Yes	No	Yes	No	Yes	No	Yes		Yes	Since this	$ 500,000.00	$ -	
	Research and Education	5866	1/14/2019	Manatee Rescue and Rehabilitiaton Center in Mississippi	Although the West Indian manatee (Trichechus manatus) has historically ranged throughout the southeastern United States, its recovering population has resulted in an increased number of animals traveling throughout the coastal waterways of Alabama, Mississippi, and Louisiana. Still, this is a vulnerable species requiring continued monitoring as well as rescue and rehabilitation services. Unfortunately, there are no facilities equipped to conduct rescue and rehabilitation efforts in Alabama, Mississippi, or Louisiana. Instead, these states must rely on assistance from facilities and personnel from other states to execute both the rescue and rehabilitation of these animals. The Institute for Marine Mammal Studies is strategically located in coastal Mississippi and has a long and established history in marine mammal and sea turtle stranding response and rehabilitation. IMMS has been involved in the rescue, rehabilitation, and release of marine mammals and sea turtles since 1984, and IMMSâ€™ staff and veterinarians have the necessary experience, facilities, and capabilities to conduct rescues and rehabilitation activities within this region as well as coordinating with both state and federal agencies.	Harrison, Jackson, Hancock	Yes	No	No	No	No	Yes	Yes	10	No	Rescue an	$ 5,000,000.00	$ -	

	Research and Education	5870	2/11/2019	Gigabit Gulf Coast and High-Tech Workforce	Mississippi Gulf Coast Community College proposes the Gigabit Gulf Coast and High-Tech Workforce project which will include the deployment, physical installation and connection of a Gigabit Gulf Coast fiber infrastructure tailor-made to meet the Coastâ€™s unique needs and requirements. In addition, MGCCC proposes to construct a Center of Excellence for Advanced Technology and offer high-tech workforce training to include Cybersecurity, Coding, Artificial Intelligence, and Virtual Reality. Mississippi Gulf Coast Community College (MGCCC) can play a unique role in helping to unify the disparate entities on the coast to accomplish these tasks. The broadband infrastructure of Mississippi has largely been in the hands of giant businesses with agendas that may not align with the interests of businesses, governments, or citizens of the Gulf Coast. In 2019, the Mississippi Broadband Enabling Act was signed into law, which allows electric power cooperatives across the state to offer high-speed internet service to its customers. Once a core cyber ring is in place, this law would allow the electric power cooperatives to take high-speed Internet service to the rural areas through the Gulf Coast region. By quickly building a future-proof pure fiber network, a Gigabit Gulf Coast can control and transform its digital future. It would establish timely, redundant, universal and affordable ultra-high speed internet connectivity. Local governments, businesses, and citizens together will spark innovation and draw new investments, develop new approaches to familiar services such as transport, education, health, utilities, and entertainment, and jump-start new ways of doing business that can take full advantage of an increasingly virtualized global economy. A vibrant fiber infrastructure will introduce a new set of challenges for everyone in the Gulf Coast region. It would be myopic to create a Gigabit Gulf Coast without training the workforce alongside this advancement to encourage innovation and protect businesses, organizations, and citizens. Objective 1: The physical installation of the fiber and connection of the key sites. This activity will proceed in as little as one or two years with new deployment technology. Activities will include first connecting public sectors, educational entities, and commercial sites with the most urgent and intensive demand. The next step will connect businesses, data centers, innovation hubs, and industrial parks that rely on data for their commercial existence. Ultimately, the pure fiber network will function as a backbone for deployment to individual homes, providing residential access to ever-richer forms of digital services and entertainment. Service providers will begin offering services over the new network and bring new applications, features,	Harrison	Yes	No	No	No	Yes	No	Yes	15	Yes		$ 26,000,000.00	$ -	
	Research and Education	5877	3/14/2019	Coastal Environment Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society (WRCS). WRCS is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf River as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippi's first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land totaling Â–428.5 acres, located in areas identified as crucial to connecting continuing corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would expand conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County which total approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. These properties are all tidally influenced, and consist of both estuarine marsh and bottom land hardwood habitats. Ecological Value: -Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. -Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. -Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. -Establishes a protected nursery ecosystem for marine life. -Opportunities for low impact recreational activities such as kayaking, bird watching, fishing, and other wildlife observation -Extends and connects corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	Land Acquisition
New	Research and Education	5878	4/17/2019	Biloxi Upstream and Downstream Storm Water Education and Community-Engaged Green Infrastructure	The people that live, work and visit the Biloxi peninsula are all within a few hundred yards of the Biloxi Back Bay or the Mississippi Sound and their actions have immediate impacts on the environment because all the stormwater runs into marine water either directly or by way of one of several bayous leading to the Back Bay. In the past few years most of the streets and the storm drainage systems on the peninsula have been or are being replaced, a situation that is positive as far as moving stormwater out of streets but will increase the stormwater impact on the bayous and back bay with more and faster moving storm water. What is more, the construction work itself has impacted the natural waterways due to increased silt running into the bayous from unpaved roads. The time for the Biloxi peninsula is right for a comprehensive community-engaged stormwater management campaign that improves and creates both upstream and downstream green infrastructure. Upstream, the project will improve the quality and quantity of water that enters the storm drainage system with four related activities: 1. Environmental education with Biloxi Public School students 2. Stormwater education to residents of the Biloxi peninsula 3. Low-impact development training and design resources for developers and city staff 4. A property owners small-grant program to do on-site and neighborhood-scale green infrastructure projects. Downstream, the project will improve the stormwater quality and quantity that enters the marine environment with two related activities: 1. Restoration and improvements of natural waterways that connect storm drainage to the Back Bay, especially Keegan Bayou and Bayou Auguste, which have been impacted most by the road construction work. 2. Coordination and leveraging of on-going and planned projects to bring green infrastructure planning and funds to install and maintain landscape areas Environmental education with Biloxi Public School students. For the past seven years GCCDS has developed and implemented educational outreach programs with Biloxi Junior High School, East Hancock Elementary, St. Martin High School, and with middle school students in the Gulfport School District. During the summer of 2017, GCCDS received funding through the National Marine Sanctuary Foundation in partnership with NOAA to further modify the curriculum for a summer program with the Boys and Girls Club of Hancock County. Measures of success: Over 400 students and teachers reached through direct programming with several hundred more potentially reached through exhibitions of work to parents, local leadership and the larger community. Outcome: Change of behavior for students, their families and larger community to reduce trash and pollution	Harrison	Yes	No	No	No	Yes	Yes	Yes	60	Yes		$ 2,080,000.00	$ -	
New	Research and Education	5881	4/17/2019	Harbor Expansion Parking Area	Along the beachfront, adjacent to the Gulfport harbor, across from the upcoming Aquarium attraction, and with access to downtown's food and beverage, gaming, and lodging, the area around Gulfport's Jones Park / Barksdale Pavilion has become the City's hub for tourism. With the expansion of recreational activities and tourism in this area, the City of Gulfport has an immediate need for additional parking. Complimenting an adjacent lot, the proposed expansion of parking along the eastern edge of Jones Park will promote workforce development by providing additional areas for workers to park, will provide visitors access to tourism, eco-tourism, and recreational activities, provide additional public access for residents and visitors to the beach and fishing opportunities, and provide access to the educational benefits associated with the new aquarium. Ultimately this parking area will ensure inadequate parking will not stifle Gulfport's booming economic development. This additional parking will complement the proposed expansion of the Gulfport Harbor. It is proposed at the southeast corner of 20th Avenue and U.S. Highway 90 and will be asphalt-paved and striped to match adjacent areas. Any end cap islands will be constructed with curb and gutter and landscaping commiserate with the area will be added.	Harrison	Yes	Yes	No	Yes	Yes	No	Yes	75	Yes		$ 2,000,000.00	$ -	

New	Research and Education	5895	9/10/2019	Assessment, Restoration & Stewardship of INFINITY Land Holdings	The goal of this project is to conduct landscape-scale ecosystem restoration on the highly visible land surrounding the INFINITY Science Centerâ€"located adjacent to, and complementary to the goals of, the Mississippi Department of Marine Resource's Coastal Preservesâ€"and to couple that restoration with a robust educational program that raises awareness of the importance of the health of our natural systems to our quality of life on the Gulf Coast. The project, as proposed, has two primary components. The restoration component will serve to utilize a recently conducted habitat assessment to implement an aggressive restoration plan, resulting in numerous ecosystem services benefits such as improved water quality, connectivity with other adjacent restored parcels, flood and storm water runoff storage, significantly enhanced vegetative diversity, a decrease in invasive species, higher quality wildlife habitat, and increased safety and security for INFINITY. The second, and equally important, component of the project is public education. We will create interactive exhibits and a comprehensive education program for teachers, students and the general public that increases awareness of the value of ecosystem restoration and promotes environmental stewardship. An outdoor classroom will be constructed in order to get participants out into the actual restoration, maximizing the educational opportunity by providing a more immersive experience.	Hancock, St Tammany	Yes	No	No	Yes	No	No	No		No		$ 2,006,123.93	$ -		
New	Research and Education	5901	4/30/2020	Enhancing Gulf Waters through Forested Watershed Restoration	Overview of Proposed Activity Background: The Gulf of Mexico's forests, when healthy, reduce sediment and nutrient yields, regulate surface water flows, and improve groundwater recharge relative to other land uses (Sun et al., 2004; Lockaby et al. 2013). They offer recreational opportunities, wildlife habitat, improved air quality, support for the region's economy, and are an integral part of the carbon cycle. Protecting forests at risk of conversion to more intensive uses (Klepzig et al., 2014), restoring native species (Brantley et al., 2018), controlling invasive species, managing for resilience against catastrophic loss (e.g., wildfire, hurricane, drought, pests, etc.), and restoring forested wetlands, floodplains and riparian areas are vital to the health of the Gulf (Vose et al., 2011). Proposal: This application seeks to establish a program that will enhance and maintain water quality and quantity by protecting, managing, and restoring forested ecosystems. The Program is centered on advancing the RESTORE Council's water quality and quantity goal, but benefits will accrue in all goals. The focus is on protecting and restoring forests, including urban forests, in priority watersheds in Alabama, Florida and Mississippi where the need is great, and Partners stand ready to assist and leverage investments. The Program is a scalable, science-based approach implemented on public and private lands. It involves: •Landowner outreach techniques that build upon and look to enhance existing tools and networks. •Coordinated delivery through State Forestry Agencies in Alabama, Florida, and Mississippi. •Focused recruitment of forest landowners in targeted watersheds. •Science-based decision support from the USDA Forest Service Southern Research Station who will use the Soil and Water Assessment Tool (SWAT) model and other data and tools to inform priorities, assess and monitor project impacts, and inform adaptive-management decisions. •Potentially using a portion of funding for an open and competitive Request for Proposals (RFP) to extend the reach of these efforts and cultivate innovation. •Targeted alignment with other federal, state, and non-federal programs as a program multiplier to conduct similar work upstream of the RESTORE coastal area. •Use of USDA practices and standards to ensure compliance with environmental and cultural resource requirements. There are limited risks and uncertainties: private landowner willingness to participate can cause delays and require strategic	Hancock, Stone,St Tammany ,Mobile,Jackson,Forrest,Washington,Harrison,George,Perry,Pearl River	Yes	No	No	No	No	Yes	No		No		$ 30,000,000.00	$ -		
New	Research and Education	5947	11/25/2020	PAWS (Pets and Wildlife) Exploratorium	HSSM is seeking funds to construct a new facility on their property, which will serve as an education and community event location. Set in a nature-inspired landscape, the PAWS Exploratorium will provide an aesthetically pleasing venue at the juncture of 28th Street and Highway 49 and we will also get with the Gulf Coast Restoration Initiative to create a nature trail in conjunction with the new facility. This new area will focus on education and conservancy of all animals while also focusing on the human component of humanity-which is already at the center core of HSSM's mission and ingrained culture related to animal welfare and humanity. This facility will provide an additional mission based attraction for families to visit while being complimentary to and not competitive with surrounding aquatic organizations. The facility will feature live engaging exhibits with animals such as turtles, snakes, opossums, raccoons, etc., enhanced interactive educational opportunities, children's activities, a small Re-Tail store, various nature trails for bird watching and a pollinator path. The Exploratorium will also be open and available to other animal welfare organizations, such as Wild at Heart Rescue and Audubon MS and can be a destination for several local summer camps such as the City of Gulfport Summer Camps and Lynn Meadows Vet Camp. The facility will utilize existing HSSM land and will enhance current programs while also serving as a centrally located site for partner organizations. This new facility will perpetually support HSSM's lifesaving efforts and strive to educate the importance of animal welfare, preservation, conservation and humanitarianism. We will seek guidance from top architect consulters that have worked on tourist engaging projects in order to create an engaging and interactive experience for all attendees. The requested funds would support design and construction plus year 1 operations and encourage ongoing fundraising. HSSM plans to sustain PAWS by funneling Club Paw summer camp registration fees back into the program and by requesting parent/teacher organizations to provide a small fee for students and charge additional adult fees for each tour/education session as well as special event rental fees. Because of PAWS HWY 49 location-a major tourist access road- and its proximity to the Aquarium, we plan to partner with the Aquarium and possibly the Institute for Marine Mammal Studies to offer joint tourism tickets. In addition, we will use our extensive individual & corporate donor network as we have an established fundraising platform for our mission based initiative. We will also share trained HSSM staff with the new facility and veterinarians are already in place and could partner with local community colleges such as MGCCC for workforce training and	Harrison	Yes	No	Yes	Yes	Yes	No	Yes	90	Yes		$ 1,123,500.00	########		
New	Research and Education	5952	11/30/2020	Nature-based Tourism with Increased Management and Stewardship for Beach Nesting and Foraging Species	The Secret Coast or Mississippi's Gulf Coast offers a mix of recreational activities that cater to many types of visitors and locals, alike. Man-made, public beaches, in Hancock, Harrison, and Jackson County account for nearly 56% of Mississippi's coastline and provide protection to seawalls and coastal roadways such as Highway 90. These beaches draw both day and overnight visitors. A 2017 study from Longwoods International found that 27% of overnight visitors and 25% of day-trippers visited the Mississippi Coast just to enjoy the beaches, far outranking the national norm. The beaches provide many different experiences including fishing, jet-skiing, aqua cycling, and sailing for people to enjoy. Moreover, the beaches are adjacent to other amenities including continued development, casinos, shops, restaurants, bases for U.S. Armed Forces, universities, hospitals, and active ports which offer a well-rounded holiday experience. Just as these sandy oases attract visitors, they also provide essential habitat for beach-nesting and foraging species, including colonial seabirds, solitary shorebirds, and marine turtles. These species compete for space with recreational beach visitors and negotiate with sources of disturbance including aforementioned recreational activities but also naÃ¨ve actions such as children chasing birds or kite flying as well as allowing domesticated dogs off-leash which can destroy bird and turtle nests in a matter of seconds. The permitted use of personal fireworks on the beaches on July 4th can flush breeding bird species off nests, exposing eggs and chicks to the elements such as extreme heat as well as to predators. The unregulated shooting of fireworks can cause possible abandonment, while also creating a dangerous environments for people attending festivities at the beach. Additionally, beach managers need to carefully balance efforts to clean the beach, which include the mechanized removal of trash and debris for people's enjoyment, while still providing this unique habitat essential for the health of beach-dependent species as well as the beach system itself. Maintenance equipment to keep the beaches clean can crush camouflaged bird eggs or buried turtle eggs. Migrating birds depend on minimal disturbance to feed to replenish fat stores to make long hemispheric journeys each spring and fall. Abating disturbance in wildlife breeding areas can lead to increased hatching success and survival of young birds and turtles. Moreover, many of Mississippi's beach-nesting species are global migrants, and it is important to stress that actions locally can have global impacts. Management of and tourism around beach-dependent species do not have to be mutually exclusive; however, management of these species need to exist to protect resources, especially as other land uses, including recreation exist. Both around the globe and in the United States, nature-based tourism has garnered support for wildlife and habitats, but there is also increasing documentation acknowledging the need for ongoing management as well. Building upon 2019's GOMESA grant, Nature-Based Tourism with Increased Management and Stewardship for Beach-Nesting and Foraging Species, Audubon proposes a Phase II	Harrison,Jackson,Hancock	Yes	No	No	Yes	No	Yes	No		No		$ 330,000.00	$ -		

	Workforce Development	1614	12/2/2011	Mississippi Invasive Plant Control Program-Congongrass Eradication Effort	(ORIGINAL ID#11538) Cogongrass (Imperata cylindrica) is an invasive, non-native grass, which occurs in the southeastern United States. A pest in 73 countries and considered to be one of the Top 10 Worst Weeds in the World. Cogongrass affects ecosystem survival, wildlife habitat, recreation, native plants, fire behavior, site management costs and more. Cogongrass is currently documented in 62 of the 82 counties in Mississippi and has become an extremely serious problem in MS Gulf Coastal Counties. Cogongrass negatively affects native ecosystems by creating a monoculture of itself wherever it occurs. It disrupts natural ecosystems and displaces native plant and animal species, including many listed as threatened or endangered, such as: the Gopher Tortoise, Black Pine Snake, MS Redbelly Turtle, Eastern Indigo Snake, MS Sand Hill crane, Red-Cockaded Woodpecker, Yellow-Blotched Map Turtle, Pondberry, and Louisiana Quillwort. Cogongrass creates extremely hazardous fire conditions for flora, fauna and humans. Due to it's high silica content, Cogongrass burns on the average four (4) times hotter than normal native fuel loads. Native ecosystems have evolved to thrive in normal pyric events. The hyper-intense fires of Cogongrass exceed the temperature level of normal environmental fires, thereby decimating native ecosystems and their inherent ability to recover and restore post-pyric biodiversity. Cogongrass also presents an economic strain to the already reduced economy of South Mississippi. It competes with all species of timber producing trees for nutrients and water, thereby reducing financial forestry growth rates. Even domestic live-stock growers are affected because Cogongrass is not palatable to cows or other livestock. Various agencies, both federal and state, have conducted Cogongrass control programs throughout the state. While these have been effective at suppression on a local basis, none has had the means to attempt eradication, in a systematic logistical manner in South Mississippi along the Gulf Coastal Counties most affected by Cogongrass. Therefore the Mississippi Forestry Commission is soliciting the Restore Program for aid. The focus of this project will be eradicating the non-native, invasive Cogongrass and restoring native ecosystems for the protection habitat for native flora and fauna. This is in turn will increase biologic diversity and both the inherent natural and economic value of Gulf Coastal ecosystems and forest. Proposal Objective: Identification/education/treatment program â€“ Treatment of active cogongrass spots is very important in the suppression of this non-native plant species. With the average cost being $579 / acre for treatment, it is quite expensive and cost prohibitive for many landowners to fund treatment. All of the funding for this project will be used to fund treatment programs in Hancock, Harrison and Jackson Counties, MS. We will treat the small spots using MFC personnel. For larger areas, we will schedule treatments by contract vendor. An extensive database will be maintained, along with GIS shape files, of all infestations mapped and treated.	Hancock, I	Yes	Yes	No		Yes	Yes	No	Yes	Yes		$ 10,000,000.00	#######	
	Workforce Development	1665	1/20/2014	North Gulfport Sewer Expansion	In December of 1993, the City of Gulfport annexed 33 square miles north of its then current limits making it the second largest city in Mississippi. As with any annexation, the City has since worked on incorporating private infrastructure into its public system. This infrastructure project consists of adding sewer service to 17 different areas encompassing over three square miles in northern portions of the City still on private sewer and septic systems. Providing access to adequate sewer utilities could benefit the local economy and stimulate job-creation by encouraging future development. Similarly, this project could benefit community-resilience due to increased flood risks associated with sea-level rise by encouraging development in portions of the city that are generally located outside the FEMA-established floodplains more common south of I-10. It would also serve to benefit the local ecological resources by removing environmentally-taxing septic tanks. This would help improve water quality by alleviating nutrients and pollutants discharged into nearby Fritz Creek, Flat Branch, and water tables from damaged and/or overflowing septic tanks. Aside from the construction jobs offered by this project, it also promotes development of workforce housing.	Harrison	Yes	No	Yes	100	Yes	No	No	No	No		$ 5,200,000.00	$ -	
	Workforce Development	1734	6/13/2013	Water Clarity and Filtration System	In August 2011, the Gautier City Council adopted a Clear Water Filtration Plan that utilizes ion exchange filtration technology in order to provide clear drinking water with much lower annual operating and maintenance costs than osmosis. Today, the brownish tint in Gautierâ€™s potable wells has impeded economic development such as hotel, restaurant and residential development. Due to the debt incurred when the City incorporated and assumed the previous utility authority, the City has not previously been able to afford the expense of an osmosis treatment facility. The newer technology of ion exchange has proven successful in states such as Florida. Gautier will be the first municipality in Mississippi utilizing ion exchange technology to provide water clarity. The system is planned in three phases. The first phase will provide a filter system treating one million gallons per day, projected to treat 80% of the Cityâ€™s demand and costing $2.8 million. The second and third phases will serve the remaining population along the HWY 57/-10 corridor and loop the filtration system for future capacity. The total cost of the three phase project is estimated to be $4.5 million. Color in groundwater may be attributed to a variety of sources including iron, manganese and organic acids. Color associated with organic acids can be measured quantitatively and represented as total organic carbon. Organic carbon is typically negatively charged which can be effectively removed with a process known as ion exchange. Ion exchange promotes chemical reactions to effectively remove deleterious compounds found in water. The Gautier Water Treatment Plant was piloted and designed to effectively remove color by utilizing oxidation, coagulation, and filtration followed by ion exchange. Projects such as this one will not only create jobs but will create the necessary infrastructure for future development and the economic growth/tourism industry. Improved water quality is a primary objective in all watersheds but specifically in coastal watersheds that feed directly into the Gulf of Mexico.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 4,500,000.00	$ -	
	Workforce Development	1747	2/18/2014	ECHCPUD Water and Sewer Master Plan	The project includes water distribution and sewer collection improvement within ECHCPUD and extending 1 (one) mile beyond ECHCPUD's boundary. The water and sewer improvements proposed are anticipated to serve ECHCPUD for the next ten years.	Harrison	Yes	No	Yes	100	Yes	No	No	Yes	No		$ 13,400,000.00	$ -	
	Workforce Development	1769	3/20/2014	Restoration of Bayou Cassotte, Bayou Chicot, Parsley Avenue, and Enger Bayou	This project will consist of water quality improvements through sediment removal in the identified degraded Bayous in this watershed. The purpose of sediment removal is to restore degraded green corridors to allow for increased boat traffic and efficient access to natural resources. These bayous have vast potential for restoration that greatly enhances their ecological value while directly engaging local communities. Restored streams help to manage storm water runoff, erosion, and sedimentation as well as provide quality habitat for wildlife. With a greater potential to manage stormwater runoff, the communities within the watershed show an improved resilience to the increase risks associated with sea-level rise and environmental stressors.	Jackson	Yes	Yes	No		No	No	Yes	No	No		$ -	$ -	
	Workforce Development	1803	4/5/2014	Property Acquisition East Pascagoula River (Fletchas Acquisition)	Property owned by the Fletchas family has long been used as an industrial shipyard on some of the most attractive waterfront property in the City. This project proposes to acquire the property, remediate, and clear it for further development.	Jackson	Yes	Yes	Yes		Yes	No	No	Yes	Yes		$ 10,189,000.00	$ -	
	Workforce Development	1804	4/5/2014	Pascagoula Riverfront Acquisition	The proposed property acquisition will allow the Riverfront Redevelopment project, started with MDA/CDBG funding to continue to grow both north and south. The project includes acquisition and infrastructure upgrades.	Jackson	Yes	No	Yes	10	Yes	No	No	Yes	Yes		$ 6,538,900.00	$ -	
	Workforce Development	1864	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Water Quality Restoration Enchancement Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring both conservation and recovery are the components of this project. Stream restoration will enhance the quality of water in adjacent waterways in addition to detention ponds and overflow discharge outfalls located within the City. In conclusion, the project restores streams and drainage discharge areas to its original state with the addition of sediment traps which makes beneficial use of runoff.	Hancock	Yes	Yes	No		Yes	Yes	Yes	No	Yes		$ 1,688,000.00	$ -	

	Workforce Development	1867	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring conservation and recovery are the components of this project a byproduct that makes beneficial use of trapped sediment also allows public access. By accessing an elevated boardwalk the estuary becomes a living laboratory, information stations educate and monitor bird populations, nest areas and health of various wetland plans and ultimately water quality. By hardening the Bay of Saint Louis with oyster and clams water quality is improved, sea grasses will be reintroduced and erosion as seen in slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. This project consist of multiple activities that stimulate public interest and support as well as education and participation in recreation restoration, seafood production and water quality. In conclusion, the project restores streams and drainage to its original state with the addition of sediment traps which makes beneficial use of urbanized run off. The project also has build in monitoring stations that benefit growth and the City supports and embraces this project..	Hancock	Yes	Yes	Yes	80	Yes	Yes	Yes	No	Yes		$ 9,519,500.00	$ -	
	Workforce Development	2192	11/13/2014	Bayou Bernard Industrial Expansion	The Harrison County Development Commission (HCDC) has 34 acres of land for development remaining in the Bernard Bayou Industrial District (BBID). To augment the amount of developable land, HCDC is requesting funding to expand Intraplex 10 area in BBID by 72 acres. This acreage is located west and adjacent to Intraplex 10 and is presently set aside for wetlands conservation. Utilizing funds provided by the RESTORE Act HCDC would allow for the purchase of necessary credits to mitigate the property and perform the necessary site preparation for immediate development.	Harrison	Yes	No	No		Yes	No	No	No	No		$ 6,000,000.00	$ -	
	Workforce Development	3234	11/17/2014	CSX Rail Bridge Replacement - Pearl River	The CSX rail bridge which crosses the mouth of the Pearl River is currently a swing bridge with a horizontal clearance of 87â€™ and a vertical clearance of 14â€™. This bridge has the smallest horizontal clearance of any train bridge located on the CSX line from New Orleans, LA. to Mobile, AL. The location of the open swing portion is located where the current of the Pearl River is at its strongest making it difficult for vessels pushing a tow to navigate between the bridge and the bank. The replacement of the swing bridge to a bascule bridge would have numerous benefits. It would increase the horizontal clearance and allow vessels to navigate in a safe manner more safely and with greater ease.	Hancock	Yes	No	Yes	100	Yes	No	No	No	No		$ 70,000,000.00	$ -	
	Workforce Development	4275	12/26/2014	Nature-based Tourism Program	The main focus of this project will be to form a collaborative effort in the development of a Task Force to sustain and promote the MS Gulf Coast National Heritage Area (MSGCNHA) as a premiere destination for Nature-Based Tourism opportunities. This project will identify opportunities approved as part of the MSGCNHA Management Plan which has a mission to promote the understanding of, conserve, and enhance the heritage resources located within the six counties of the MS Gulf Coast by sharing the areaâ€™s nationally significant story with residents and visitors through activities and partnerships that celebrate the areaâ€™s unique history, people, traditions, and landscape. The MSGCNHA is a partnership of communities, governmental agencies, natural resource managers, nonprofit organizations, academic institutions, the tourism industry, and nature-based businesses along with countless others who value the regionâ€™s rich cultural and environmental diversity, history, natural beauty, and traditions. These partnerships enhance, conserve, promote and provide connectivity among the MS Gulf Coastâ€™s many heritage resources. These resources provide heritage tourists with authentic experiences reflective of the MS Gulf Coast National Heritage Areaâ€™s overall mission and Management Plan. The MS Gulf Coast National Heritage Area plan explores methods which would serve to make natural areas and living traditions economically beneficial and available to the public directory to business owners and practitioners of traditions and indirectly to the area as a whole. Economic benefits come directly from fees for tours, food and lodging, transportation, lessons, music, re-enactments, and heritage based products such as crafts, music, posters, publication, and art. There are also indirect benefits through the impact of heritage tourism on the local economy in terms of support services. One of the many strengths the Mississippi Gulf Coast offers is the large amount of undeveloped area within it which is available for recreation purposes. The Task Force will identify businesses that will allow residents and visitors to experience these extensive natural areas. Available experiences range from chartered fishing trips in the MS Sound, canoe trips on the areaâ€™s many inland waterways, or a beautiful bike ride on our scenic Mississippi Coastal Heritage Trail. The Task Force will work with local groups and businesses to explore ways to expand the availability of nature-based tours. These types of activities provide the authentic experiences that heritage tourists seek. This Program will build upon existing nature-based tours such as paddling on the Pascagoula River, the largest impeded river system in the lower 48 states, and guided excursions to the barrier islands of the MS Sound.	Hancock,J	Yes	Yes	No		Yes	No	No	No	Yes		$ 6,000,000.00	########	
	Workforce Development	4298	1/8/2015	ONE COAST Scenic By-ways and Relocation Campaign	It is recommended that $2,019,250 in Restore Act Funds be utilized to launch a ONE COAST Scenic Byways and Relocation Campaign to drive tourism and real estate sales. A decade in the making, Beach Boulevard in Hancock County, is the only shoreline along the MS Gulf Coast that has received the designation as a Mississippi Scenic By-way. The vision for a scenic byway did not stop at the 13 miles of shoreline in Hancock County. The 30 miles in and around NASAâ€™s Stennis Space Center buffer zone, an untouched natural green space that can never be developed , is now part of the By-ways to Space. The buffer zone---a natural haven for birding, biking, fishing, camping and exploring---is not only a national asset for homeland security and defense, but also for the emerging new eco-tourism product of the Mississippi Gulf Coast. Work is underway now to connect the beach boulevard by-way to the rest of the Gulf Coast by naming Highway 90 in Harrison and Jackson counties as Scenic By-ways, to celebrate the 100th Year Anniversary of the Old Spanish Trail. During 2015, the by-way will extend into Harrison County up to Debuys Road. There is interest from Jackson County leaders to extend the by-way there and in Biloxi, segmentation may be required to carve out the Casino Districts. A Mississippi Scenic Byway designation can benefit a community in several interrelated ways: Resource protection; Community recognition as a source of pride; Economic development/tourism through visitor kiosks, vista spots to serve tourists; Community visioning to address roadway corridors and land use issues; Partnering by bringing individuals, land owners, the public and private sector to partner for betterment of the community; Access to federal and state grants, trusts, loans and assistance programs for safety improvements, facilities, improvements to access areas, protecting historical and cultural resources. The mission of the Mississippi Coastâ€™s two new scenic byways is to preserve, enhance, protect and promote the natural, historic and cultural tourism intrinsic values of 62 miles of scenic roadways for the enjoyment and education of the American public. The goal of the scenic by-ways programs is to introduce the Byways to Space and the Beach Boulevard Scenic Byways to the public by: â€¢Taking advantage of the INFINITY Science Center, a Mississippi Tier I tourist attraction that opened in mid April 2012 that has a focus on the science of land, sea, and outer space.	Hancock,H	Yes	Yes	Yes	50	Yes	Yes	Yes	Yes	Yes		$ 2,019,250.00	$ -	
	Workforce Development	4337	3/11/2015	Back Bay Biloxi Shoreline and Habitat Restoration	Project will restore shoreline area, ensuring growth of emergent plants including Spartina, Juncus, and other grasses and trees that have been lost to erosion. Several acres will receive remediation and land will be extended to include a narrow beach that has been lost due to increased force of wave action. The select means of restoration will improve conditions for more than a dozen endangered species in the area as shown in this proposal.	Harrison	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	health & s	$ -	$ -	

	Workforce Development	4343	7/24/2015	West Jackson County Constructed Wetlands Restoration Project	The West Jackson County Constructed Wetlands Treatment System was established in in 1990 to treat the centralized wastewater collected in western Jackson County, Mississippi. As wastewater passes through multiple cells of wetland vegetation, excess nutrients, heavy metals, and other environmentally harmful contaminants are removed from it prior to release into Costapia Bayou. In addition to wastewater treatment, the wetlands are a favored habitat for a variety of wildlife and serves as a complementary habitat to the adjacent MS Sandhill Crane National Wildlife Refuge. Due to the concentration of birds in these wetlands, we formed an agreement with the National Audubon Society to open the facility for avian observation and counting every Thursday. For the last several years, the wetland vegetation has been decimated by the invasive apple snail. Apple snails are a serious threat to freshwater wetlands and estuaries worldwide, with severe damage documented along the Gulf of Mexico coast. Consumption of wetland vegetation by the apple snail has led to drastic reductions in the wastewater treatment efficiency and wildlife habitat. The main objectives of this proposal are to restore the functionality and habitat provided by this treatment wetland through eradication of the apple snails and restoring of vegetation. The Jackson County Utility Authority has begun efforts to remove apple snails under monitoring by the MS Departments of Environmental Quality and Marine Resources. However, limited resources have hampered these efforts. We would like to expand upon these activities by researching and implementing the best methods for removing apple snails, followed by replanting of the wetland vegetation using peer-reviewed methods to maximize habitat and water treatment. Throughout all steps in this project, water quality, percent coverage of vegetation, and snail abundance will be quantified to determine the benefits of restoring this wetland. We will also implement outreach activities by using this site as a demonstration and education project that will be open to the public, for guided tours, on select days. The expected outcomes from this project are preservation and restoration of wetland habitat, increased wastewater treatment efficiency, improved water quality, significant contributions to knowledge base for the control of apple snails, and workforce development through hiring and training of new employees to address this problem and funding graduate research.	Jackson	Yes	Yes	Yes	62	Yes	Yes	No	Yes	No		$ 650,000.00	$ -	
	Workforce Development	5525	1/1/2018	Nature Tourism Proposal for the Mississippi Gulf Coast Region: A project and budget plan based on the 2016 process and strategy document,	Tourism and business leaders have realized the necessity of creating an environment of conservation and protection of Mississippiâ€™s coastal resources in the wake of the Deepwater Horizon Oil Spill in the Gulf of Mexico. A great deal of planning has taken place since 2010 to celebrate the natural beauty and wonder of the Mississippi Gulf Coast. There is an area of opportunity in this region that is a most promising method to protect natural resources and promote environmental stewardship while stimulating new economic development. Across the world, nature tourism is recognized as a significant effort to provide responsible travel to natural areas and promote conservation. Nature tourists are looking for original and authentic experiences to high-quality environments with historical and cultural significance. These travelers are more likely to be well educated and travel often in multi-generational groups with extended families. They are seeking safe, well-connected communities that place emphasis on environmentally and culturally responsible travel with low visitor impact to natural areas. The Final GoCoast 2020 Report, commissioned by the Executive Order of Governor Phil Bryant, included focus of â€œEco-Tourismâ€To be a substantial initiative for recovery, restoration, tourism, and economic development. In response to the worthwhile efforts of the GoCoast 2020 Final Report, a Nature Tourism Task Force was created and adopted the â€œFramework for Nature Tourismâ€ on November 1, 2013. In its conclusion, the Task Force recommended the Mississippi Gulf Coast National Heritage Area (MGCNHA) to lead a nature-based tourism initiative. In 2015, with funding from the National Parks Service, the MGCNHA reinvigorated this Nature-based Tourism Task Force of nineteen (19) Gulf Coast leaders, with assistance from the contracted team of Allen Engineering and Science, Gulf Regional Planning Commission, and the Heritage Trails Partnership. This year-long consultation culminated in the recommendations depicted in the 2016 NBT Plan for Coastal Mississippi (NBT Plan). Accepting the charge to implement a nature-based tourism plan, this Mississippi Gulf Coast National Heritage Area - Nature Tourism Proposal for the Mississippi Gulf Coast Region outlines the framework to manage, operate, plan, market, and implement the recommendations with a budget of $10 million over the next five years. This proposal outlines management and administration, operations, planning, marketing, and implementation. Management and Administration: The MGCNHA will provide general management, oversight, and coordination of day to day operations for the nature-based tourism program. It will provide leadership to local officials and partners to implement the NBT Plan. Six (6) Area Managers will be chosen by each of the six coast counties to serve as liaisons to ensure that initiatives and	George,Ha	Yes	Yes	Yes	10	Yes	Yes	No	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5537	6/1/2017	Water Filtration, Clarity and Treatment Project	The City of Gautier geographically is located along the west edge of the Pascagoula River Basin as it empties into the Mississippi Sound. The aquifers that the City utilizes for its water supply are highly enriched with iron, manganese and organics due to its geographic location. These natural elements contained within the water supply generate a brownish tinted water, which is aesthetically unpleasing and is an impediment to economic development. Although the Cityâ€™s potable water meets all of the required public health parameters and is deemed safe for consumption, the negative image greatly impacts the City in its ability to attract residents and economic development such as restaurants, hotels and tourists. After many years of research and a commitment from the Mayor and City Council, the City adopted a Clear Water Filtration Plan by utilizing new technology, an Ion Exchange Filtration System, to treat their water supply for improving water clarity. The Filtration Plan separated the City into three regions, and each region would require the installation of an Ion Exchange Filtration Station to treat the Cityâ€™s daily generated water supply of 1.6 million gallons. The City completed its first site in 2015. It is located at 3305 Gautier Vancleave Road and treats approximately 1 million gallons per day, which equals approximately 63% of the Cityâ€™s daily water usage . Although a significant portion of the Cityâ€™s water supply is being treated, water wells in the other regions are still producing the discolored water into the Cityâ€™s water distribution system. Therefore, residents and businesses in those areas still receive varying levels of discolored water. The scope of work for this project is to secure the necessary property within the remaining two regions and construct two additional Ion Exchange Filtration Systems to ensure all of the Cityâ€™s water supply is properly treated and clear in order to promote and enhance economic development of the City. The locations of the two systems should be placed in close proximity of the regionâ€™s water supply wells and water storage facilities to minimize the necessary pipeline cost to capture the discolored water for treatment prior to entering the water distribution lines. This project will improve the livablity of the community, enhance sustainability and promote long-term growth. The benefits associated with this project are the overall public confidence in the Cityâ€™s water system, removal of the negative image of the discoloration of the water which will enhance the Cityâ€™s ability to expand residential and commercial growth, along with	Jackson	Yes	No	Yes	95	Yes	No	No	Yes	Yes		$ 6,000,000.00	$ -	Land Acquisition
	Workforce Development	5539	6/1/2017	Southeast Gautier Sewer and Storm Sewer Infrastructure Upgrade	The southeast portion of the City of Gautier has experienced repetitive flooding and sewer back up. To address this ongoing problem, the City is proposing to upgrade its sewer and storm sewer systems. The overall improvement plan is to upsize the gravity sewer lines, slip line all manholes/laterals and upgrade all existing sewer pump stations serving this area. The City also is proposing to replace deteriorated and undersized drainage pipe, clear and construct profiled channel ditches to expand the capacity of the drainage flow and to construct a sediment retention basin north of U.S. 90 to retain a percentage of water from entering the drainage system through this area during rain events. The benefits of this project is improving the quality of life for the residents who experienced repetitive flood loss over the years. Eliminating the sewer back up into the storm sewer system, increasing the capacity of storm water run-off where acceptable and to retain storm water at strategic locations will improve the water quality of the Cityâ€™s bayous and the Mississippi Sound.	Jackson	Yes	No	Yes	95	Yes	No	Yes	Yes	Yes		$ 10,000,000.00	$ -	
	Workforce Development	5540	6/1/2017	Tourism Marketing Strategies	This projectâ€™s scope would be to develop a tourism marketing strategy that would include the creation of an interactive website and attractive brochure/other marketing materials for placement at key locations to highlight the Cityâ€™s unique tourist attractions, lodging opportunities, retail areas, restaurants and other amenities. This informational packet would include a map showing directions to each location. It is anticipated that kiosks could be strategically placed that would aid tourists in finding their desired destinations and to inform of other points of interest. The City does not have a chamber of commerce to help with such items.	Jackson	Yes	Yes	Yes	25	Yes	Yes	No	Yes	Yes		$ 100,000.00	$ -	

	Workforce Development	5541	6/1/2017	Shepard State Park Recreational and Ecological Enhancement	The City of Gautier has assumed the daily operations and management of this 395-acre park, which is located south of U.S. 90 along Graveline Road. Currently, the park consists of eight miles of trails, with a mix of developed and primitive camp sites throughout. In addition, the park has disc golf and a premier outdoor archery range with 28 lanes. The City has increased the utilization of the park by the addition of these amenities and has hosted national archery tournaments, bringing tourists from all over the United States to participate, as well as state high school archery teams and Senior Olympics tournaments. SEC college archery has also expressed interest in using the facility for its conference championship. The facility is one of few within the state of Mississippi and is unique to the state due to its surroundings. The City is already home to the Mississippi Sandhill Crane National Wildlife Refuge and offers birding and wildlife eco-tours of its swamps and bayous, resulting in eco-tourism visitors from all 50 states and numerous other countries each year. The City seeks to add amenities and upgrades as set forth below to Shepard State Park to further enhance, capitalize on and increase the number of tourists for its eco-tourism attractions. The City plans to expand the recreational opportunities available at Shepard State Park to assist in developing this pristine park into one of the southâ€™s premier nature destinations. Expansion of the existing nature trails will be implemented to reach additional areas of the park. Shepard State Park is home to a variety of wildlife native to the coastal area, such as great white egrets, pelicans, eagles and osprey. Additionally, other woodland creatures reside in the area, including deer, wild rabbits, opossums, foxes, raccoons and more. In the surrounding bayous, visitors can see turtles, alligators, wild geese, and a wide variety of fish. Strategically placed resting areas and observation decks will be constructed for creating an environment for optimal opportunities to monitor the wildlife and bird watch, as the park is listed on the Mississippi Coastal Birding Trail. The existing road network throughout the park is in need of repairs. The City is proposing to complete such repairs, clear underbrush and remove invasive species of vegetation. Furthermore, new water and sewer lines will be placed to upgrade and expand sites within the park with such amenities to support additional restrooms, pavilions and playground areas. Power lines and park friendly lighting will be installed to delineate the appropriate pathways for visitors throughout. Due to the age of the park, many upgrades are needed, and this project would include walking trail upgrades, including new foot bridges in low-lying areas prone to flooding, trail clearing, a rehabilitated small boat launch and fishing pier, updated and repaired grills, fire pits and picnic tables at RV sites, an amenities building with laundry facilities and recreational game tables, educational plaques for the trails, fire pits, an outdoor classroom, a natural playground, traditional playground equipment, kayak launches, a lodge to accommodate guests and overnight studies in conjunction with the outdoor classroom, a new bathhouse and bathroom renovations. The City envisions that the lodge will be utilized by educational institutions, including the	Jackson	Yes	Yes	Yes	50	Yes	Yes	Yes	Yes	Yes		$ 9,000,000.00	$ -	
	Workforce Development	5555	5/15/2017	Sewer Infrastructure Rehab Project	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The Districtâ€™s certificated area is located within watershed areas that drain with open ditches and nominal amounts of subsurface drainage. The discharge points for these watershed areas are tidally influenced due to the geographical location of the Districtâ€™s certificated area. Located along the Southern Certificated Area Boundary is the Northern Shoreline of the Bay of St Louis, the Western Certificated Area Boundary is the East Shoreline of Rotten Bayou and the Northern Certificated Boundary is the Southern Shoreline of Rotten Bayou and Bayou LaSalle. Forty years ago the clay sewer mains were installed in the Districtâ€™s certificated area at the primary material for sewer mains. At the time of installation, pipe bedding standards were not as widely understood as they are today. The rigid nature of clay makes it very brittle and when unstable soil conditions are introduced, cracking will occur. Once a clay sewer pipe cracks and starts to leak the surrounding soil enters the pipe with any flow creating voids and uneven loads and eventually the pipe will collapse. The District is currently experiencing large amounts of inflow and infiltration as a result of a large portion of our infrastructure consisting of cracked and leaking 40 year old clay pipe that needs rehabilitation. The increase in I&I causes excess amounts of water into the sewer infrastructure resulting in sewage overflows, costly cleanup and potential hazards to the environment The scope of work for this project is to rehabilitate 174,250 lineal feet of cracked, broken and failed clay sewer mains, point repair mains and remove roots. The rehabilitation of the clay sewer mains will consist of cured-in-place pipe (CIPP) and CCTV of all mains after rehabilitation. The Districtâ€™s CCTV software will need to be updated in order to complete reports necessary reports and proper documentation of the rehab improvements. The benefit of this project is to restore and conserve habitat; restore water quality; replenish and protect living coastal and marine resources and enhance community resiliency.	Hancock,H	Yes	Yes	Yes	80	Yes	No	No	Yes	No		$ 6,732,000.00	$ -	
	Workforce Development	5558	5/16/2017	Old Fort Bayou Road at I-10 Interchange	The Jackson County Board of Supervisors is proposing the construction of a new Interstate 10 interchange with Old Fort Bayou Road. The right-ofâ€™way is available for immediate consideration for construction and would strategically position a new access point for entry into Jackson County from Interstate-10. Centrally located approximately four miles east of the Washington Avenue/Highway 609 exit and approximately four miles west of the Highway 57 exit, this interchange would provide much needed relief from traffic congestion in this heavily traveled area of the I-10 corridor. The Washington Avenue/Highway 609 area has experienced tremendous growth in the last few years as the population tends to migrate to the north, and this interchange would help to alleviate the substantial traffic burden in that area in addition to providing easy access to prime developable property adjacent to Interstate 10. Not only would this interchange serve to improve the lives of the local community, but it also provides opportunities for the establishment of new service industries such as gas stations, hotels and restaurants to attract travelers. Safe, modern, and easily accessible transportation routes are key to promoting and sustaining long term economic growth. Because the I-10 corridor is a heavily traveled interstate highway, and this area continues to see growth, a new interchange point would greatly enhance the desirability for development. The short term economic impacts would be felt immediately throughout the community. From the creation of construction jobs, the demand for materials, services and equipment to the need for food, housing and other goods, this project would help to stimulate the local economy. The Old Fort Bayou Road and the I-10 interchange is the next logical step in promoting growth in this area. In addition to other proposed road improvements, this interchange will greatly enhance the profitability and livability in this area for years to come.	Jackson	Yes	No	Yes	100	Yes	No	No	No	Yes		$ 30,000,000.00	$ -	
	Workforce Development	5559	5/16/2017	McCann Road Overpass	This project consists of construction of a new overpass at McCann Road and Interstate 10 in the St. Martin Community. This new overpass will provide a direct connection from the Commercial Business District along Lemoyne Blvd. to the new Commercial Business District along the I-10 Connector road, thereby increasing access and opportunity for new growth in this area. The addition of this strategic access linking two commercial business districts will maximize the growth potential for both areas. The short term direct economic stimulus will be immediately felt throughout the community in the form of employment and income for the construction industry and indirectly by many others who are employed by companies that provide materials, equipment, and services that are required to support the project. Workers for whom jobs are created by this project have new income to spend on consumer goods and services, which in turn creates new jobs in retail, manufacturing of consumer goods, food processing and personal services. A vision for the future, neighborhood support, and infrastructure are key elements to attracting developers to invest in existing communities. The implementation of several major access routes along the two developing business corridors provides for multiple transportation routes for businesses and consumers, thereby strengthening the potential for continued growth. The overall economic benefits will be realized initially as a financial stimulus for the area based on construction activities, and subsequently the functional integration of the structure will benefit the expansion of the community for many years. Growth in this area is sustained by the local community, bolstered by a growing population, and positively impacted by consumers that choose to travel to this increasingly popular shopping destination across county and state boundaries.	Jackson	Yes	No	Yes	100	Yes	No	No	Yes	Yes		$ 10,000,000.00	$ -	

	Workforce Development	5561	5/16/2017	Radio Read Water Meter Project	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The District has 4,295 aging water meters, over 54 percent of the meters are older than 10 years and of the 54 percent, 73 percent are over 15 years. Due to the age of the Districtâ€™s meters, the District is losing revenues and unaccountable water loss. Aging water meters, experience a breakdown of accuracy over time. The breakdown results is less accurate water meters that leads to lost revenue because the consumption of water is not completely recorded. In an article published in Water and Waste Digest, (Dr. Hans D. Allender, 2000) test results consistently proved that water meterâ€™s recording capability diminishes over time. The article reported the results of an analysis that included sampling of a number of meters in one zone based on age and flow; low, intermediate and fast. After the accuracy of the meters were calculated, the gallons of water going through the meters without being recorded were calculated by subtracting the average consumption from the result of the multiplication of the RAM (the Real Accuracy of Meters). An average consumption of 9,000 gallons was used in this analysis based on a typical household and historical data considering the summer peak consumption. The recorded results were as follows: Meters 15 Years Old 9,000 Gallons - (9,000)(0.994) = 54 Gallons per month Meters 20 Years Old 9,000 Gallons - (9,000)(0.990) = 90 Gallons per month Meters 25 Years Old 9,000 Gallons - (9,000)(0.958) = 378 Gallons per month Meters 30 Years Old 9,000 Gallons - (9,000)(0.816) = 1,656 Gallons per month	Hancock	Yes	Yes	Yes	85	Yes	No	No	Yes	No		$ 750,000.00	$ -	
	Workforce Development	5562	5/17/2017	Master Sewer System Study	Diamondhead Water and Sewer District is located in Hancock County Mississippi within the City of Diamondhead. We provide water and sewer service to approximately 4300 customers and a population of 9100. The District has significant amounts of inflow and infiltration, aging sewer mains of which 47% are 30 plus year old sewer clay pipe, lift stations and discharge force mains that need all need to be reviewed for current and future service needs. The district needs a Master Sewer System Study conducted for the sewer collection system to: evaluate inflow and infiltration, lift stations and discharge force mains; to serve as a logical, cost-effective framework for making organizational changes; to assist with meeting new environmental regulations and for environmental impact. The scope of work for this project will consist of advertising for RFQâ€™s, selecting a firm to complete the Master Sewer System Study and completion of the Study. The benefit of this project is to evaluate the Sewer System hence creating a tool that will assist with significantly reducing flood waters from entering the sewer infrastructure, reducing sewage overflows hence restoring water quality; replenishing and protecting living coastal and marine resources; restoring and conserving habitat and enhancing community resiliency and to assist with meeting new environmental regulations and for environmental impact.	Hancock	Yes	No	Yes		Yes	No	Yes	Yes	Yes		$ 100,000.00	$ -	
	Workforce Development	5852	9/10/2018	Mississippi Coastal Improvement Program (MsCIP) Deer Island Ecosystem Restoration Program	Scope of Work: This Project will complement the existing Federal restoration projects at Deer Island by minimizing the fracturing of diversity and creation of an additional 400 acres of highly productive wetlands, beach and dune and maritime forest habitat. Planned improvements include restoration of a portion of the northern and southern shorelines of the island, and new stone training dikes to prevent future erosion. Project will also restore emergent coastal tidal marsh, restore vital nodal connections of marsh/estuarine habitat for Gulf Sturgeon (threatened species) feeding and nursery use as well as federally protected migratory species, project will restore critical winter habitat for Piping Plover (threatened species), and nesting habitat for raptors including Bald Eagle as well as listed sea turtles, project will also fully restore barrier island and natural hydrologic conditions to MS Sound as well as historical inflows of Gulf water into the sound area. The project will also fully restore historic geomorphic features through restoration, stabilization of island elevations and shoreline profiles. Background and Cost: A feasibility study was completed in September 2009. The recommended total project, estimated to cost $25,800,000 with an estimated Federal cost of $16,770,000 and an estimated non-Federal cost of $9,030,000. Of this amount, $1,231,000 is estimated to be needed to complete PED (design phase elements) with an estimated Federal cost of $800,000 and an estimated non-Federal cost of $431,000. Funding Status: This project is currently unfunded. The next potential chance for funding will be from the FY 20 (October 2019) budget. Ahead of this, local non-Federal Sponsor support via a Letter of Intent will be needed. Would like to further discuss the LOI with you going forward.	Harrison	Yes	Yes	Yes		Yes	No	Yes	No	Yes		$ 25.00	#######	
	Research and Education	7	10/18/2013	Restore watersheds	FEMA is making flood insurance too expensive for many waterfront properties Property owners and the environment would both be well served by purchasing those properties and returning them to their natural state resulting in a better buffer in anticipation of the next Katrina like storm.	Hancock, Harrison, Jackson	Yes	Yes	No	No	No	Yes	No		No		$ -	$ -	
	Research and Education	52	10/24/2013	Graveline Bay Preserve Land Acquisition	The following is from the Department of Marine Resources web site: http://www.dmr.ms.gov/joomla16/index.php/mississippi-gems/215-graveline-bay Coastal Zone Management Mississippi Department of Marine Resources Mississippi GEMS Graveline Bay Preserve DetailsCategory: Mississippi GEMS 1.Graveline BaySite Information Point(s) of Contact: Mississippi Department of Marine Resources, Coastal Preserves Program 2.Geographic Information: The land is located between Ocean Springs and Gautier along the Mississippi Gulf Coast.1.Narrative Description of the Site: The wetland boundary of this 2,339-acre preserve is Graveline Bay and Bayou. One exception is the exclusion of one major tributary. Graveline Bay and Bayou represents one of few relatively undisturbed estuarine bays and small tidal creeks in Mississippi. The area supports salt marsh, brackish marsh, and several oyster beds. The bay, marsh, adjoining upland forest, and undeveloped beach front near the mouth of Graveline Bayou are an important landing area for neotropical migrant birds. This coastal bay/marsh estuarine system receives only local freshwater runoff and consists largely of mid-level needle rush (Juncus roemerianus) dominated marsh along its entire length. Smooth cordgrass (Spartina alterniflora) occurs largely as narrow (1-3 m) bands along the creeks and bayous. 2.Date When Information Last Updated: March, 1998 3.Location: Jackson County, N30 E 21""47" W88 E 41""41" 4.Area of Influence: Watershed 3.Ecological/Cultural Characteristics1.Habitat type: The following ecological communities are expected or known to occur:	Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	

	Research and Education	88	10/29/2013	Mississippi Habitat Stewards Program	Summary: Mississippi Wildlife Federation requests consideration of funding to continue growth and success of Mississippi Habitat Stewards Program along our Gulf Coast, assuring a team of trained volunteers to provide services to natural area managers, especially those related to public use, access and interpretation. Habitat Stewards also provide an engaged citizenry to support greater public support of natural areas management and restoration. Background: In July 2010, in response to the Deep Water Horizon explosion and the anticipated arrival of oil along Mississippiâ€™s shoreline, the National and Mississippi Wildlife Federations launched a volunteer surveillance network. This network of volunteers across the coast was established to monitor sections of shoreline and document their findings. By late summer, it became evident that damages from the BP oil spill would be dramatically different from those experienced after the Exxon Valdez disaster. However, many of the volunteers were still anxious to provide meaningful efforts on behalf of the coastal wildlife and their habitats. With this request in mind and with a clear understanding of the needs of natural lands managers on the Coast, Mississippi Wildlife Federation received grants from Shell Oil and BP in 2011 to develop a one-of-a-kind program for volunteers to be trained in coastal habitats and management of natural areas, named Mississippi Habitat Stewards. After completing the training, mentors introduce the new Habitat Stewards to natural lands managers to match volunteers with certain skills and partners with corresponding needs. The success rate of the program depends on the continued mentoring and landowner needs assessments by Mississippi Wildlife Federation. Currently, 38 students have completed the 24 hour training program. From 2011-2013, Mississippi Habitat Stewards have completed over 4,100 hours of volunteer service for natural land management tasks at many partner locations across the coast including: -Mississippi Coastal Preserves (managed by Department of Marine Resources) -Conservation parks owned and managed by Land Trust for the Mississippi Coastal Plain -Mississippi Sandhill Crane National Wildlife Refuge -Grand Bay National Wildlife Refuges -Walking Trails at USM Marine Education Centerâ€™s Cedar Point site -Trails at Shepherd State Park	George, Harrison, Jackson, St. Tammany, Stone, Hancock, Pearl River, Mobile	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,175,855.00	#######	
	Research and Education	89	10/29/2013	Gulf Coast Prescribed Fire Cooperative	Thousands of acres of private and public longleaf pine forests, savannas and coastal marshes within the three coastal counties are in need of management activities including prescribed burning and exotic plant control to restore habitats of native wildlife and plants and also to increase values of privately-owned forest lands for recreational use and forest products. This program will establish an organization of professional fire practitioners to apply fire as a science based management tool on private and public wildlands adjacent to or in close proximity to established core conservation areas. All burn teams will be trained to National Wildfire Coordinating Group (NWCG) standards. Each team includes the following staffing and equipment: type-2 prescribed fire burn boss; type-3 tractor plow or tracked engine with operator, one type-6 engine with engine boss and three type-1 firefighters. Based on funding, a maximum of three teams will be established. Teams may work independently or in conjunction with each other or with established fire crews from local, state and federal agencies to apply prescribed fire on approved public and private lands. Team members will be available to make presentations concerning the benefits of prescribed fire to school and civic groups and to provide fire management training to local landowners and firefighters. When not engaged with prescribed fire-related activity, teams will engage with other land management needs: monitoring results of prescribed fire projects; conducting fuel reduction and invasive species control; monitoring, mapping and maintaining public access and nature trails; and prescribed fire education projects. Teams will be supervised by a Field Coordinator (professional fire manager) who will oversee safety, training, work assignments, planning and coordinating with local partners and cooperators.	Hancock Harrison, Jackson	Yes	No	No	Yes	Yes	Yes	No		Yes		$ 25,120,000.00	$ -	
	Research and Education	1166	11/7/2011	Bayshore Wetlands Restoration	(ORIGINAL ID#11432) The scope of the project seeks to restore a small tidal wetland area in the downtown waterfront area in D'iberville, Mississippi.	Harrison	Yes	No	No	No	No	Yes	No		No		$ 400,000.00	#######	
	Research and Education	1172	6/13/2013	Graveline Bayou Restoration Project	(ORIGINAL ID#606) Graveline Bayou is located in the southwest corner of the City of Gautier. The bayou is an intricate network of waterways that contain marsh habitats, deeper water habitats, and adjacent coastal habitat for native wildlife. The bayou empties into the Mississippi Sound which is a part of the Gulf of Mexico. Historically, the bayou provided direct easy accessibility to the Gulf of Mexico for commercial and recreational fishermen, as well as sailing, kayaking, and ecological viewing. This allowed commercial fishermen to anchor their boats at their residences, saving harbor fees & slip rental, transportation fees, etc., thereby reducing product costs to the consumer. Due to deterioration of the bayou, accessibility has been severely compromised or completely blocked, and the natural habitats have changed in character. What was once a thriving ecological, commercial, and recreational hub has been reduced to residences with a water view, without the benefit of the Gulf access. The main factors contributing to the deterioration of the bayou: 1. Sediment accumulation at the mouth of the bayou due to sediment transport westward by the prevailing southeast wind, and the associated wave action, has eliminated the ability of most passenger boats and commercial vessels to navigate out of the bayou to the open Gulf. 2. Erosion of upstream drainage channels due to bank erosion is continuously depositing sediment into the upper reaches of the bayou, which then travels further downstream during subsequent rain events, filling in the channel and reducing the allowable depth for navigation. 3. The closure of the mouth of the bayou during the Deepwater Horizon Oil Spill Crisis compounded the sediment accumulation problem removing any agitation of the bayous by boat traffic which may re-suspend and flush out the newly deposited sediment. Boat traffic was greatly diminished on Graveline Bayou in the spring and summer of 2010 because of the fear that oil in the bayou from the blowout could damage engines. As a result, this shallow bayou did not receive the normal bottom sediment scouring associated with boat traffic and the subsequent flushing with the tidal cycle. Now that the bayou depth is less than three feet, scouring is still minimal because boats can no longer navigate the bayou. During an average tidal cycle, approximately 40% of Graveline Bayou is flushed and replaced. This would include any re-suspended sediment present in the water. 4. The depth of Graveline Bayou presents a flood hazard. Following Hurricane Katrina, the bayou began silting in more rapidly than in preceding years. This problem was further exacerbated by the Deepwater Horizon incident. Now, the bayou is so shallow it no longer affords protection to shoreline properties from flooding.	Jackson	Yes	Yes	No	Yes	No	Yes	Yes	100	No		$ 7,200,000.00	$ -	
	Research and Education	1238	9/21/2011	Habitat Restoration and WQ Management in the Mallini Bayou System	(ORIGINAL ID#11158) The Mallini Bayou System consists of 5.71 miles of 12 inter-connected channels located on the eastern side of Bay St. Louis immediately west of the City of Pass Christian, MS. Harrison County proposes to improve and mange the water quality in the Mallini Bayou System of channels for the purpose of eliminating stagnation and hypoxia; reducing nutrient concentrations and coliform counts; and aiding compliance with the TMDL. The NRDA project involves the installation of a pipeline to pump high-quality bay water into Bayou Boisdore during ebb tide periods; remove obstructions; and dredge channels to the original permitted design depth. The pump station will be located about 5,750 ft from the north inlet of Mallini Bayou and about 5,505 ft from the south inlet at Anchor Basin; pumped bay water will flow equal distances north and south. Aeration devices are to be positioned in key channel intersections to facilitate water circulation. The goals are to prevent fish kills and improve larval survival rates so the Mallini Bayou System is restored to a functional estuary and contributes to the NRDA restoration efforts for the greater Gulf of Mexico ecosystem. Gannett Fleming, a global engineering company with over 95 years of experience, has been selected as the design-build firm for this project. Project tasks will include hydrodynamic modeling to the Mallini Bayou System, geotechnical analysis of the pipeline pathway, property acquisition, design engineering, permitting, contracting, construction oversight and commissioning/start-up. The company will operate the installed facilities for 20-years and provide environmental monitoring and reporting for verification of environmental offset credits during the anticipated Deepwater Horizon Spill 20-year loss period of the deep sea floor habitat. Following completion of design engineering an operating reserve account is to be established by NRDA and managed by Harrison County Government.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 20,000,000.00	$ -	

	Research and Education	1269	12/5/2013	Ecological Restoration of Slash Pine on the Barrier Islands and Coastal Wetlands	Hurricane Katrina and the BP oil spill were very damaging to the barrier islands of the Mississippi, Alabama and Florida Gulf Coast. There is a consensus developing that some restoration of the island ecosystems will be required, including replanting the vegetation, especially the trees. Nothing has been written about the seed sources of the restoration plantings. The arboreal vegetation of the barrier islands of the eastern Gulf Coast of the US consists mostly of slash pine (Pinus elliottii var. elliottii) and live oak (Quercus virginana). During tropical storms, these islands are often inundated with sea water. After Hurricane Katrina (2005), 80% of the slash pine and 50% of the live oak were dead within a few months after the storm. There was very little wind-throw. The mortality was undoubtedly due to exposure to sea water. With these events occurring every decade or so, one might expect that natural selection would result in some genetic adaptation in these populations to temporary salt water inundation. Slash pine occurs not only on the barrier islands but well inland, far from salt water exposure. Seed sources normally found in commercial nurseries are derived from inland populations. It could be a serious error to replant the island vegetation with inland sources that are not adapted to salt water exposure. Mergen et al. (1966) compared barrier island slash pine with mainland sources and found morphological differences. Salt tolerance was not studied. Land (1973) found salt tolerances higher in slash pine than in loblolly pine. It is not a coincidence that slash pine is the only pine found on the Mississippi barrier islands. This study will seek to explore genetic differences in salt tolerances among half-sib families and populations of island and mainland slash pines, with the goal of identifying appropriate salt-tolerant seed sources to use in restoration projects. Seed will be collected from individual trees of three types of populations: 1. Barrier island slash pine, attempting to sample all barrier islands; 2. Beach populations adjacent to the island populations, i.e., populations exposed to salt water through tidal actions; and 3. Mainland populations sampling south-to-north transects starting at points ranging from southeast Louisiana to northwest Florida. Seedlings will be grown for several months and then tested in replicated trials by dipping in artificial seawater. In addition, DNA	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 2,750,000.00	#######		
	Research and Education	1591	8/18/2011	Wolf River Restoration Project	(ORIGINAL ID#849) The purpose of the Wolf River Restoration Project (WRRP)is to facilitate fish, wildlife, and plant habitat protection, restoration, and enhancement, primarily for Federal trust resources including migratory birds, endangered and threatened species, coastal wetlands and marshes, and aquatic resources, floodplains, and riparian areas along the Wolf River in Hancockand Harrison Counties in Mississippi.The core of the WRRP is lands totaling approximately13,969 acres or approximately 28.5 miles of Wolf River Frontage. Residential and commercial development in Hancock and Harrison Counties has seen a tenfold increase over the past two decades. Consequently, much of the lands found within the Wolf River Watershed have been or are under immediate threat of conversion.By purchasing, restoring and preserving this critical drainage and riparian buffer, the Wolf River will continue to provide important freshwater flow into the important tidal marshes of the Bay of St. Louis and the Mississippi Sound.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 42,000,000.00	#######		
	Research and Education	1594	8/25/2011	Restoring critical habitats in the Gulf of Mexico Marine Protected Area Network	(ORIGINAL ID#904) In April 2011, the Rookery Bay National Estuarine Research Reserve (RBNERR) hosted a two-day workshop in Naples, Florida, with funding support from NOAA's Marine Protected Area (MPA) Center, that brought representatives from four key agencies managing MPAs in the Gulf together to discuss collaborative efforts. NOAA's NERRs and NMS, and DOI's NPS and NWRs were represented. Outcomes of the workshop included a commitment from the Gulf MPA partners to work together to build a framework for regional response to catastrophic events such as the Deepwater Horizon spill, share information and technology relating to climate science, and to seek regional opportunities to advance common stewardship goals of MPAs such as habitat restoration. A regional approach to restoring critical marine and coastal habitats within the Gulf of Mexico MPA Network has significant benefits: -Gulf MPAs already have long-term monitoring and GIS capabilities that can effectively track changing environmental conditions correlating with restoration success, such as water quality. -Gulf MPAs have on-the-ground programs in place designed to provide protection and increase awarenwess of the need to conserve resources, such as law enforcent, education, outreach and training, visitor use management, and active community-based volunteer programs. -Gulf MPAs have a diverse range of critical marine and coastal habitats within their designated boundaries (e.g corals, seagrasses, oyster reefs, mangroves, saltmarshes) including offshore submerged resources, that link directly to the life cycles and migratory patterns observed in economically important marine species including various species of sportfish, shrimp, and crabs. Envisioned is a three-year regional collaborative restoration project that builds on the strengths of the newly established Gulf of Mexico MPA Network noted above. RBNERR, with support from NOAA, is currently working on developing the initial framework and communications/training supp ort for the Gulf Network. The proposed regional habitat restoration project would have three components: (1) Year I: Gulf MPAs will work collaboratively within the Network to identify high priority habitats suitable for restoration that meet criteria for regional linkages, and develop a regional scope of work for restoring habitats within 8 - 10 MPAs. (2)Year II: Gulf MPAs initiate site restoration projects, engaging community volunteers as appropriate and monitoring progress. (3) Year III: Gulf MPAs complete site restoration projects, continue monitoring efforts, and conduct targeted outreach to raise awareness of value of restored Gulf habitats.	n/a	Yes	No	No	No	No	Yes	No		No		$ 50,000.00	#######		
	Research and Education	1595	8/31/2011	Ohr-O'Keefe Musuem of Art Native Habitat Restoration Project	(ORIGINAL ID#960) In 2010, the Ohr-O'Keefe Museum of Art received funding from the MS Coastal Impact Assistance Program to development a landscape master plan focusing on the conservation, protection and restoration of the Museum site fronting the Mississippi Sound. The grounds of the Museum will be restored with native plants, the site becoming a living laboratory for coastal restoration projects including heritage plantings and wetlands restoration. The site will serve as a microcosm of naturalized coastal landscape and topology. The project will provide a permanent, very visible forum increasing public awareness of environmental issues and improving stewardship of the Mississippi coastal ecology by example. The plantings will serve as an educational tool coordinating a permanent exhibition documenting the coastal habitat restoration areas of the Museum grounds with a key and written material available to school groups and other visitors to the Museum. The Ohr-O'Keefe is requesting funding to implement the Museum's restoration/landscape project. In May 2011, landscape architect Thomas Doyle of LA+ South Inc, with a team of geologists, wetlands scientists and botanists completed the master plan for the landscape architecture of the Ohr-O'Keefe Museum site. This plan is an overview of restoration plantings of native species, including replacement of Live Oaks trees and other site specific species, for upland, freshwater wetland and beach/dune habitats as well as pedestrian circulation and human impact. The landscape master plan was approved by the Museum Board of Trustees Executive Committee in June 2011. The projected start date for the project is September 2013, when construction of all buildings has been completed. The time frame for the project is 10-14 months; the total budget is $800,000.00. Benefits derived from this project include stabilization, restoration, and preservation of an important coastal ecosystem, enhancement of natural scenic qualities in the coastal are a, and education of 75,000+ visitors annually regarding the importance of restoration and preservation of natural habitats and coastal wetland areas through exhibitions and educational programs at the Museum. Area school teachers will have the opportunity to use the Museum's living laboratory as a visual learning technique integrating the Museum grounds and information into their lesson plans in academic subjects required by the Mississippi standard course of curricula.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ 800,000.00	$ -		
	Research and Education	1610	10/26/2011	Restoration of Oyster Habitats in Point aux Chenes Bay in Eastern Jackson County, Mississippi, within Grand Bay National Estuarine Research Reserve	(ORIGINAL ID#11425) A cooperative, federal, state, and private project to restore the Point aux Chenes Bay ecosystem and its historic oyster habitats through: 1. The rebuilding of the Grand Batture Islands with sediments maintenance-dredged from nearby channels or Mississippi Sound (USA-COE); 2. The removal of sections of man-made levees along US H/W 90 & the CSX Ralroad that restrict freshwater inflows into the bay (MsDOT & CSX); 3. The restoration of freshwater inflows to restablish proper estuarine conditions for oyster setting, survival, growth, & reef development; 4. The re-establishment of water-bottom conditions through planting of oyster shells and/or crushed concrete aggregate materials (by MsDMR); 5. The relaying & transplanting of live oyster stocks from Pascagoula Bay & Graveline Bayou by private oyster fishermen under the direction of MS DMR; 6. The removal of upland sources of domestic & industrial watsewaters that now flow into Bayou Cumbest & Bangs Lake (by MsDEQ); 7. The reclassification of Point aux Chenes Bay & Bangs Lake as approved or conditionally-approved shellfish-growing waters (by MsDMR & USFDA); 8. The requirement that Mississippi Phosphate Company restore Bangs Lake to its pre-acid spill status including the funding of oyster restoration therein; 9. The re-imbursement of local oytser fishermen for assisting with oyster relaying & replanting in Point aux Chenes Bay & Bangs Lake; and 10.The re-establishment of commercial & recreational oyster fisheries in Point aux Chenes Bay, Bangs Lake, & in Bangs, Crooked, & Cumbest Bayous.	Jackson	Yes	Yes	No	No	No	Yes	No		No		$ 2,500,000.00	$ -		

	Research and Education	1614	12/2/2011	Mississippi Invasive Plant Control Program-Congongrass Eradication Effort	(ORIGINAL ID#11538) Cogongrass (Imperata cylindrica) is an invasive, non-native grass, which occurs in the southeastern United States. A pest in 73 countries and considered to be one of the Top 10 Worst Weeds in the World. Cogongrass affects ecosystem survival, wildlife habitat, recreation, native plants, fire behavior, site management costs and more. Cogongrass is currently documented in 62 of the 82 counties in Mississippi and has become an extremely serious problem in MS Gulf Coastal Counties. Cogongrass negatively affects native ecosystems by creating a monoculture of itself wherever it occurs. It disrupts natural ecosystems and displaces native plant and animal species, including many listed as threatened or endangered, such as: the Gopher Tortoise, Black Pine Snake, MS Redbelly Turtle, Eastern Indigo Snake, MS Sand Hill crane, Red-Cockaded Woodpecker, Yellow-Blotched Map Turtle, Pondberry, and Louisiana Quillwort. Cogongrass creates extremely hazardous fire conditions for flora, fauna and humans. Due to it's high silica content, Cogongrass burns on the average four (4) times hotter than normal native fuel loads. Native ecosystems have evolved to thrive in normal pyric events. The hyper-intense fires of Cogongrass exceed the temperature level of normal environmental fires, thereby decimating native ecosystems and their inherent ability to recover and restore post-pyric biodiversity. Cogongrass also presents an economic strain to the already reduced economy of South Mississippi. It competes with all species of timber producing trees for nutrients and water, thereby reducing financial forestry growth rates. Even domestic live-stock growers are affected because Cogongrass is not palatable to cows or other livestock. Various agencies, both federal and state, have conducted Cogongrass control programs throughout the state. While these have been effective at suppression on a local basis, none has had the means to attempt eradication, in a systematic logistical manner in South Mississippi along the Gulf Coastal Counties most affected by Cogongrass. Therefore the Mississippi Forestry Commission is soliciting the Restore Program for aid. The focus of this project will be eradicating the non-native, invasive Cogongrass and restoring native ecosystems for the protection habitat for native flora and fauna. This is in turn will increase biologic diversity and both the inherent natural and economic value of Gulf Coastal ecosystems and forest. Proposal Objective: Identification/education/treatment program â€“ Treatment of active cogongrass spots is very important in the suppression of this non-native plant species. With the average cost being $579 / acre for treatment, it is quite expensive and cost prohibitive for many landowners to fund treatment. All of the funding for this project will be used to fund treatment programs in Hancock, Harrison and Jackson Counties, MS. We will treat the small spots using MFC personnel. For larger areas, we will schedule treatments by contract vendor. An extensive database will be maintained, along with GIS shape files, of all infestations mapped and treated.	Hancock, Harrison, Jackson,George,Harrison,Jackson,Mobile,Hancock,Hancock,Stone,St Tammany,Mobile,Jackson,Pearl River,Harrison,George	Yes	No	Yes	Yes	Yes	Yes	No		Yes		$ 10,000,000.00	#######	
	Research and Education	1615	12/9/2011	Increase the pace, quality and permanence of voluntary land and water conservation through the Partnership for Gulf Coast Land Conservation	(ORIGINAL ID#11546) The Partnership for Gulf Coast Land Conservation project The Partnership for Gulf Coast Land Conservation (PGCLC) is a new coalition of local, regional state and national land conservation organizations devoted to advancing land and water conservation in the Gulf of Mexico region. This initiative is organized under the auspices of the non-profit Land Trust Alliance (Alliance) and is patterned after other successful land trust coalitions across the country. Today our membership consists of 25 national, regional and local land trusts operating in the Gulf States. The Partnership's mission is to work together across the five Gulf of Mexico states to increase the pace, quality and permanence of voluntary land and water conservation in the coastal region. Land trusts are community-based non-profit organizations that work with landowners to permanently conserve forests, rivers, farms, ranches and other natural areas critical to a sustainable environment and healthy, thriving communities. Through this project, the Partnership proposes to: 1. Increase the effectiveness and efficiency of land trusts in the Gulf Region. 2. Develop and promote a public policy agenda which will reduce the barriers to private sector conservation efforts and increase funding for acquisition and restoration. 3. Develop collaborative projects that will enable the land trust community and supporters to implement landscape scale conservation measures in the region. Collaborative projects may be built around water quality, critical habitat, or other criteria. 4. Participate in landscape-scale conservation planning in collaboration with other conservation partners (resource agencies and other non-government organizations) that prioritizes habitat for endangered and threatened species, improvements to water quality, connectivity to other protected lands, trust resources and important cultural and recreational features. 5. Participate in and coordinate our efforts with other ong oing conservation planning and implementation activities through entities such as the Gulf of Mexico Alliance and the Gulf of Mexico Foundation and others.	n/a	Yes	No	No	No	No	Yes	Yes		No		$ 1,000,000.00	$ -	
	Research and Education	1767	3/18/2014	Grand Bayou Ecological Restoration	The Grand Bayou Ecological Restoration project is in Campbell Bayou-Bayou Caddy watershed (HUC 031700091401) west of the City of Waveland in Hancock County, MS surrounding Buccaneer State Park. The project includes three interdependent estuarine ecosystems; 1) Grand Bayou, 2) Mud Bayou and 3) Jackson Marsh. Grand and Mud Bayous are open estuarine marshes supporting sub-tidal and inter-tidal communities. The Mississippi Department of Marine Resources manages the 565 acre Grand Bayou as a Gulf Ecological Management Site for its special ecological significance and unique habitats for producing fish, wildlife and other natural resources. Jackson Marsh is abuts Grand Bayou upstream. A low-head dam built in the 1960s severely disrupted tidal influence in the marsh and freshwater flows into the Bayou. The altered hydrology and salinity allowed the bayou and marsh to become infested with invasive aquatic species, e.g. water hyacinth, cattail and Chinese tallow in riparian areas. Trash and debris further reduced flows and trapped sediment. The project will reestablish linkages between these ecosystems by restoring, 1) the natural hydrology of 20,518 linear feet of streams and bayous and 2) 662 acres of adjacent wetlands and coastal marsh habitats. This will have significant and measurable benefits to highly altered coastal streams and habitats by providing integrated, aquatic green corridors in urban/suburban landscapes. Further, the project addresses stormwater management and will be designed and constructed to use natural hydrology to minimize erosion and sedimentation throughout the ecosystems. The hydrology will be restored by removing trash and debris from the waterways and demucking accumulated sediment from primary channels. To the maximum extent practicable, Green Infrastructure techniques and materials will be used to integrate the roughly 25% of the City of Wavelands stormwater run-off that enters Jackson Marsh and Grand Bayou into the natural hydrology. Modification or alternatives to the low-head dam will be evaluated and a solution negotiated with the property owner. For wetlands, invasive vegetation will be physically removed and native marsh plants with high phytoremeditation potential planted. This will effectively and inexpensively treat residual and periodic continuing oil-contamination once established. The restored hydrology will help return historic tidal flows and salinity levels to enhance delivery of estuarine natural resource services and hinder the return of invasive aquatic and riparian species. Finally, the project will add 2.2 miles of nature/education trails and up to four interpretive pavilions to Buccaneer State Parks trail system to enhance public access, recreation, and tourism to the restored coastal ecosystems. This project complements and supplements three (3) other proposed restoration projects: 1) the Mississippi Department of Environmental Qualitys (MDEQ) Restoration of Buccaneer State	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ 9,600,000.00	$ -	
	Research and Education	1768	3/19/2014	Weeks Bayou Restoration/Education Project	The MEC is requesting support for a coastal habitat restoration project at the mouth of Weeks Bayou in the City of Ocean Springs, MS. The disturbed property was the site of a private residential home constructed on filled coastal wetlands habitat. The wetlands were filled in 2003, with the home completed in early 2005. The home was lost in Hurricane Katrina in 2005 and has remained undeveloped for the past eight years. The City of Ocean Springs acquired title to the property with FEMA funds and has conveyed the property to the Land Trust for the Mississippi Coastal Plain to restore the property to itsâ€™ natural state. The MEC is proposing the restoration work will be planned and implemented through a cooperative partnership between the MEC, the City of Ocean Springs, Land Trust for the Mississippi Coastal Plain, Ocean Springs School District (OSSD), and Mississippi State Universityâ€™s Gulf Coast Community Design Studio (GCCDS). The MEC, working with the GCCDS, will plan a way to restore the site that is likely to include removal of part of the retaining wall, re-grading the land to include some high land near road with natural slope and access to water for sampling. The site will be replanted with appropriate native wetland plants under the direction of GCRLâ€™s Coastal Ecology Group. A small observation deck and access to Weeks Bayou for water quality, fauna and flora sampling and monitoring will provide opportunities for MEC based educational and community outreach programs after completion. MEC educators will work with Ocean Springs Schools to coordinate a student based monitoring program for ~100 selected OSSD middle school students and 5 advising teachers. The monitoring may include data collection, water quality, elevation surveys on adjacent beach, sampling and analysis to assess restored slope function using benthic invertebrates or plant recolonization. All sampling activities are covered under the Saltwater Scientific Collection Permit that is issued to GCRL through the Mississippi Department of Marine Resources. The successful implementation of this restoration/education project will have short-term and long-term benefits.	Jackson	Yes	No	No	No	No	Yes	Yes	10	No		$ 158,855.00	$ -	

	Research and Education	1772	3/20/2014	Marsh Restoration	This project will use the sediment removed from the bayous within the Bayou Cassotte-Pt Aux Chenes Watershed for marsh creation pump it via sediment pipelines into an area of open water near the Pt Aux Chenes Bay. Marshes within the watershed have degraded to open water from a combination of factors, including lack of natural fresh water and sediment input. The sediment removed from the first project will be transported via sediment pipelines into an area near Bangs Lake. the material will spread over the project area and become primarily contained with existing land features. The pipeline will be camouflaged under the boardwalk in the area adjacent to the Bangs Lake Viewing Pier and Park. Unlike most marsh restoration projects that involve borrowing fill material from adjacent shallow water areas within the landscape, this project will utilize renewable bayou sediment minimizing disruption of the adjacent water and marsh platform.	Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	
	Research and Education	1796	6/1/2014	The Crawfish Restoration Trail	Crawfish help to maintain the eco system by scavenging and eating algae that rob fish and plants of sunlight and oxygen. Crawfish also act as a source of food for other animals. Because crawfish are sensitive to any form of pollution, they are good indicators of water quality. There are over 400 species of crawfish in North America and the most common, the red swamp crawfish, can be found in abundance in the Mississippi River Basin. However, there are two species of crawfish which can only be found in George, Green and Jackson Counties in Mississippi and Mobile County in Alabama, the dwarf crawfish and the least crawfish. Globally, NatureServe lists their status as vulnerable while on the State/Province Conservation list they are considered imperiled. Hope CDA request funds for the implementation of an environmental cultural stewardship program which would educate students and spur ecotourism using the crawfish as motivational symbol. OBJECTIVE: 1.Student Education a. Educate summer and afterschool program students on environmental stewardship and the importance of crawfish and other animals in maintaining the ecological balance of this river system. b. Provide education on the restoration site though maps and best management practices designed specifically for the project activity. c. Study the impact of growth and spawning by increasing water temperature using solar technology at an artificial marshland system erected at Hope CDA. Information will be shared with scientist through the NatureServe, Citizen Science Program. 2. Student Restoration and Research Project a. Students will clean site and implement best management practices for the critical habitat of the crawfish and other animals and plants including but not limited to planting shade trees. b. Take eco tours along the Pascagoula River. 3. Educate Public and Spur Tourism a. Sponsor an art contest to design/sculpt a crawfish which could be used as a conservation symbol and site marker along the river. b. Strategically place markers at river sites in three counties. c. Students will develop a virtual eco tour on the Hope CDA website describing actual sites marked by numbers 1-10 on the "Crawfish Restoration Trail (Tour). " A phone application or link to the Hope CDA website will be developed so that tourist can take the actual tour from markers 1-	Jackson	Yes	No	No	Yes	No	Yes	Yes		No		$ 300,000.00	$ -	
	Research and Education	1863	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Living Shoreline Protection and Marsh Restoration	Hardening the Bay of Saint Louis with oyster and clams; reintroducing sea grasses along the shoreline compatible with tidal hydrology and salinity; monitoring both conservation and recovery are components of this project. By hardening the Bay of Saint Louis with oyster and clams, water quality will be improved. Erosion as seen on slides 4 and 5 should be reduced or eliminated and monitoring stations should show anticipated accretion. In conclusion, the project restores the shoreline, restores water quality and enables monitoring for both conservation and restoration progress.	Hancock	Yes	Yes	No	Yes	No	Yes	No		No		$ 740,500.00	$ -	
	Research and Education	1864	6/9/2014	Diamondhead Ecosystem Restoration, Stabilization and Sustainability Project - Water Quality Restoration Enchancement Project	Stream restoration, sedimentation control, ditch bank restoration, habitat restoration, natural resource and monitoring both conservation and recovery are the components of this project. Stream restoration will enhance the quality of water in adjacent waterways in addition to detention ponds and overflow discharge outfalls located within the City. In conclusion, the project restores streams and drainage discharge areas to its original state with the addition of sediment traps which makes beneficial use of runoff.	Hancock	Yes	Yes	No	Yes	Yes	Yes	No		Yes		$ 1,688,000.00	$ -	
	Research and Education	2107	8/29/2014	Invasive Plant Species Control	Both terrestrial and aquatic invasive plants are causing devastating effects to the native Gulf Coast ecosystems, agriculture industry and public entities. Recent hurricanes spread many of these plants in the region. Grass farmers, timber growers, livestock producers, horticulturalists and many others in the industry are becoming overwhelmed with these invasives. The high cost of treatment and the aggressive establishment of many of these species is causing great concern to our agriculture industry. Native ecosystems are becoming greatly affected by these invasive plants as well, reducing biodiversity and decreasing native food for wildlife. The thick rhizhomes of cogongrass make it difficult for tortoises and other animals to burrow. Cogongrass is highly combustible and burns at a much hotter temperature than native undergrowth, sometimes killing mature timber and creating a dangerous situation around structures. Aquatic invasives like salvinia, hydrilla and water hyacinth choke waterways and block sunlight. Japanese climbing fern can pull down saplings and Chinese tallow tree and privet hedge quickly colonize open areas. Public entities spend much money and staff time battling these plats. The Soil and Water conservation Districts in the lower six counties propose an outreach and education plan for these invasive pest plants. In addition, we would develop a treatment program and task force consisting of State, Local and Federal Agencies, private businesses and organizations to deal with the encroachment of these species in the lower six counties of Mississippi.	Harrison, Hancock, Jackson	Yes	No	No	No	No	Yes	No		No		$ 9,000,000.00	$ -	
	Research and Education	2163	2/2/2015	Oyster Bayou Restoration Project at Beauvoir	The purpose of this project is to implement the recommendations of The Nature Conservancy (TNC) assessment of Oyster Bayou. The plan is to assess the conditions within the Oyster Bayou drainage basin and develop a list of drainage improvements that can be implemented by stakeholders to improve drainage and habitat conditions. Oyster Bayou is a small tributary to the Mississippi Sound that meanders through the 52 acres of historic grounds of Jefferson Davis' mansion know as Beauvoir. Oyster Bayou was once part of a relatively large drainage basin that extended west and north of Beauvoir and Beauvoir Road. The drainage basin has been extensively developed with little regard for comprehensive and coordinated stormwater management within the basin. As a result, there has been an increased volume of water that flows through the lower portions of Oyster Bayou causing minor flooding and erosion which has impacted the natural habitat along the bayou. The objectives of TNC's assessment are to 1) evaluate upstream drainage conditions that result in discharges if stormwater into Oyster Bayou; 2) work with Beauvoir representatives and other stakeholders to assess opportunities for additional stormwater treatment functions of Oyster Bayou; 3) assess water flow characteristics and methods to stabilize and enhance areas along the 2,250 linear feet of riparian habitat associated with the system; and 4) implement selected ecological restoration activities within the Oyster Bayou drainage basin. The goal of Beauvoir's project will be to implement upstream drainage features west of Beauvoir Road that contribute to the quality and quantity of stormwater that discharges to Oyster Bayou; improve assimilative capacity and stormwater treatment functions within the drainage basin which will lead to enhanced water quality benefits and improved aquatic and terrestrial habitats adjacent to Oyster Bayou; provide additional water quality benefits and improvements for this tributary to the Mississippi Sound; implement ecological restoration activities within Oyster Bayou drainage basin; and provide education and outreach activities. Further restoration actions for the stream and adjacent uplands are also part of this project including an assessment of the stream by a biohydrologist (since the flow/velocity is higher that would have been naturally due to much of the watershed being paved/channelized, increasing runoff), as well as, an assessment of current impediments to the flow of the stream (roads, etc.) and determine if a more â€œstream friendlyâ€ design could be beneficial. The use of natural grade control structures (i.e., logs and tree stumps) to slow down water, which leads to erosion of the banks could be used to trap sediment coming	Harrison	Yes	No	No	Yes	No	Yes	Yes		Yes		$ 1,000,000.00	$ -	

	Research and Education	4353	4/17/2015	Wolf River Preserve Restoration	Wolf River Preserve Restoration (estimated budget- $451,500): Wolf River Preserve is a 2,426-acre area protected by the DMR that contains expansive tidal freshwater and brackish marsh along the lower Wolf River, DeLisle Bayou, and Bayou Portage. DMR has identified the need to restore a natural hydrology to much of the Preserve, which is affected by unused logging roads and other barriers to natural sheet flow. This project will restore natural stream function and freshwater flow to 400 acres of estuarine and freshwater wetlands impacted by now defunct logging roads, in cooperation with the DMR. Restoration strategies include installing culverts at appropriate elevations to restore natural stream flow, installing low water crossings or removing unused logging roads to restore natural sheet flow across coastal plant communities, and replanting restored areas with native wetland vegetation. Stewardship activities will be developed with the DMR and the Mississippi Wildlife Federation to host volunteers from the Mississippi Habitat Stewards Program.	Harrison	Yes	No	No	No	No	Yes	Yes		No		$ 451,500.00	$ -	
	Research and Education	5444	10/29/2015	Delisle Bayou Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. This parcel is located along Delisle Bayou in Harrison County, Mississippi and is part of the Delisle watershed. This parcel encompasses a significant oak grove that is home to several 800-year old live oak trees, as well as waterfront acreage to Delisle Bayou. Protection of this parcel would be essential in maintaining green-space within the surrounding community. This property would also serve as an outdoor classroom for nearby schools. Ecological Significance: -Historically significant in protection of 800-year old live oaks and habitats. -Creates open spaces that will provide areas for people to witness and learn about their natural environment. -Creates open spaces that provide opportunities for low impact recreational activity, such as bird watching and other wildlife observation, fishing, net-casting, and kayaking. -Protects emergent vegetation and subsurface vegetation that provides values required for wildlife to nest, rest, breed, and forage. -Provides critical wintering and migratory stop-over sites for migratory birds. -Protects near-by developed properties as a buffer area for storm surge by providing dispersal and displacement in a flooding event. These flood events have a natural function of turnover and flushing of coastal wetlands. The protected open spaces create an offset to protect community infrastructure.	Harrison	Yes	No	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5450	11/11/2015	Longleaf Pine / Water Quality Restoration Project	A project that would look to restore/enhance and protect longleaf pine and bottomland hardwood habitat in the six coastal counties of Mississippi. The restoration and/or enhancement efforts would improve water quality and habitat for many species of wildlife including some listed and threatened and/or endangered.	Pearl River, Stone, George, Hancock, Harrison and Jackson	Yes	Yes	No	Yes	No	Yes	No		No		$ -	$ -	Land Acquisition
	Research and Education	5476	4/20/2016	Horn Island	As part of the Gulf Islands National Seashore all available acres on Horn Island needs to be purchased to preserve the natural importance of untouched sand, dunes dotted with sea oats, tall pines on small groves, and a few inland lagoons. This magnificent Island is the result of a marvelously rich ecosystem that serves as home and nursery for an enormous array of sea life. It is home to varied wildlife including alligators, ospreys, pelicans, ducks, tern, herons, and other migratory birds. The Sound and the Gulf host innumerable species of sea life. The island is undeveloped, and is a favorite boating destination for those living on the Mississippi Gulf Coast.		Yes	Yes	No	Yes	No	Yes	No		No		$ 2,850,000.00	$ -	
	Research and Education	5489	6/21/2016	Clermont Harbor Acquisition and Restoration	Clermont Harbor once featured a stately resort in western Hancock County built in 1915, with paddleboats, a dance pavilion, gates to the community, a pier and boat harbor. It was heavily damaged by the 1915 hurricane, then rebuilt, and finally burned in 1946. Since Hurricane Katrina, many of the homeowners surrounding the Harbor have not returned, leaving a large swath of land untended. Renew Our Rivers efforts to clear hurricane debris from the last fifty years have been an important step toward improving water quality. The harbor connects to the Mississippi Sound through large culverts, instead of the open channel for boats that is once sported. However, it still acts as a marine nursery for fish and shellfish. Restoration of the marsh edge, buffer plantings to filter stormwater, and reforestation of the site will improve the marine and human habitat along its edge. The project request is for acquisition and permanent conservation of adjacent lands, from willing owners. Those lands will be made accessible for public access to the waterway, and will support nature-based tourism with low-impact improvements including: recreational trails, a pavilion, interpretive signage, restoration of the Clermont Harbor pillars, and a kayak launch.	Hancock	Yes	Yes	No	Yes	No	Yes	Yes		No		$ 250,000.00	$ -	
	Research and Education	5508	8/17/2016	Keegan Bayou Waste Water Treatment Plant Improvements for the Collection and Treatment of Seafood Industry Discharge	As part of the comprehensive public and private effort to improve water quality in the Back Bay of Biloxi before it reaches the Gulf of Mexico, the City of Biloxi is requesting RESTORE funding to reroute seafood processing byproduct discharge and treat it at the Keegan Bayou Waste Water Treatment Plant. This project will result in benefits to the public by preserving existing levels of business and supporting expansion of the local seafood industry operating on the Back Bay while significantly enhancing water quality through more efficient collection and treatment of industrial discharge. The proposed discharge collection and treatment improvements will provide a well-coordinated system to more expeditiously improve Back Bay water quality by exceeding National Pollutant Discharge Elimination System permit requirements for existing processors while allowing the cost-effective growth of Biloxiâ€™s seafood industry. This project complements the City of Biloxiâ€™s RESTORE Project #5399, Back Bay of Biloxi Festival Marketplace and Marinas, which requests funding to revitalize the seafood industry through public improvements that include expanded commercial dock space and supportive landside amenities. Project #5399 also includes incentives to diversify the regional seafood industry through development of such things as a soft-shell crab aquaculture program in partnership with the Mississippi Department of Marine Resources. The two projects will be coordinated to enhance traditional working waterfront activities on the Back Bay with a variety of land uses that showcase Biloxiâ€™s rich cultural history as the former â€œSeafood Capital of the Worldâ€ through shopping, dining, entertainment, and educational venues. These authentic, family-oriented activities will help grow the regional tourism industry in concert with activities to revitalize the seafood industry. The two RESTORE projects also will work together to meet federal and state water-related public health goals of the Clean Water Act to support present and future most beneficial uses for the propagation and growth of aquatic life as well as public water supply and public recreational uses. Implementation of both projects will have significant near-term as well as long-term positive impact upon Back Bay water quality, wetlands conservation and recreational safety and appeal. In collaboration with the Harrison County Utility Authority and the Mississippi Department of Environmental Quality, the City of Biloxi will design the discharge collection and treatment project to address projected levels of increased discharge from anticipated seafood industry expansion. Best management practices will be used throughout project implementation and operation.	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100	Yes		$ 25,000,000.00	$ -	

	Research and Education	5526	12/10/2016	Magnolia Bayou Acquisition and preservation/research center	Magnolia bayou is an approximately 87 acre bayou and stream that feeds into the Bay Saint Louis bay. It sits just behind the Froogels and to the east of Dunbar street off of Highway 90. It is relatively undisturbed, with homes surrounding the boundaries of the bayou. Hancock County does not have much in the way of environmental education centers, and this would be the perfect location for it. There is a cleared tract of land that sits just off the service road that could serve as the parking lot and educational building location. The educational center will offer classes on the natural environment in Hancock county, tours of the bayou, educational outreach to local schools and groups, etc. This will help bring eco-tourism to Hancock County, start a grassroots educational program with the local youth to teach them how to be environmentally conscious from a young age, and to preserve a very important piece of Hancock County for years to come. This project is flexible, but the important part is protecting this land from any future developments and to utilize it to educate our youth. If there are any questions about this proposal please don"t hesitate to contact me! Thank you so much for indulging me in this proposal.	Hancock	Yes	No	No	Yes	Yes	Yes	Yes		Yes		$ -	$ -	Land Acquisition
	Research and Education	5799	8/8/2018	Pascagoula Tributaries Nutrient Reduction Project	The Gulf of Mexicoâ€™s health and productivity is directly and significantly influenced by the quality and quantity of fresh water delivered bays and estuaries in the Mississippi Sound. In turn the quality and quantity of water in major tributaries such as the Pascagoula River is heavily influenced by land use and the condition of its tributary rivers. To make meaningful, measurable improvements to the Pascagoula Rivers water quality and quantity it is necessary to start in these tributary rivers and watersheds. The Pat Harrison Waterway District has the legal authority and administrative mechanisms to coordinate federal and state agency activities to improve water quality and quantity in the Pascagoula Basin and actively engage County and local governments in those efforts. In particular projects coordinated with county and city officials in the Bouie, Leaf and Chickasawhay Rivers and watersheds can measurably and significantly improve the quality and quantity of water flowing into the Pascagoula River, the Pascagoula estuary and on to the Gulf of Mexico. Specific activities include but are not limited to; 1) restore natural flows by removing debris, trees, logs, sediment and foreign objects from these rivers and their tributaries; 2) restore and protect degraded river/tributary banks by implementing structural and non-structural measures; and 3) identifying and addressing nonpoint sources of nutrient loading in these rivers and their tributaries.	Jackson,George	Yes	No	No	Yes	No	Yes	No		Yes		$ 5,000,000.00	$ -	
	Research and Education	5826	8/10/2018	Middle Escatawpa Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Middle Escatawpa River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	Jackson,George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5827	8/10/2018	Upper Escatawpa Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Upper Escatawpa River watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	George	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	
	Research and Education	5828	8/10/2018	Hobolochitto Nutrient Reduction	Improve water quality by reducing nutrient loads to coastal watersheds. Develop conservation plans on agricultural land and rural communities that support them to address nutrient and sediment runoff; and implement conservation practices identified in the conservation plans. The primary goal for this project is to improve water quality through nutrient and sediment reduction. The health of the Gulf of Mexico depends upon the health of its estuaries, and the health of those coastal waters is influenced by land uses in the watersheds of its tributaries. In the five Gulf States, over 80 percent of the acreage is in private ownership (USDA-NRCS 2014) and is used for forestry and agriculture. This watershed-scale project restores water quality impacted by the DWH oil spill by reducing nutrients and the sediments carrying them into coastal waters. Runoff from cropland, pasture, grassland, forest, urban areas contributes nutrients and sediments that adversely affect the health of coastal waters of the Gulf. While agricultural lands are a contributor (and in many instances, not the leading contributors) of nutrients to coastal waters, there are opportunities to address nutrient related resource concerns at their sources across multiple landuses in the Hobolochitto Creek watershed. USDA will provide outreach and technical assistance to voluntary participants -- especially on the most vulnerable acres in the watersheds--to develop conservation plans. The project proposes to implement clusters of conservation practices within the smallest watershed practicable with the goal of making a discernable difference in water quality at the watershed level. While this targeted and concentrated approach is desired, the project proponent understands the voluntary nature of landowner participation and will strive to reach the critical sources within the watershed. The proposed conservation practices would reduce nutrient losses from the landscape, reduce nutrient loads to streams and downstream receiving waters, and reduce water quality degradation in watersheds that would provide benefits to coastal watersheds and marine resources.	Pearl River	Yes	No	Yes	Yes	No	Yes	No		No		$ 2,000,000.00	$ -	

	Research and Education	5846	8/13/2018	Mississippi-Jourdan/Wolf Watershed Restoration	NOAA Project ID#13900: The Deepwater Horizon oil spill caused direct, significant and long-term harm to the Gulf of Mexico, the Mississippi Sound and Mississippiâ€™s Bay of St. Louis. Following clean up from the oil spill, the long-term recovery and restoration of these waterbodies depends on the health of its bays and estuaries. The health of these bays and estuaries is directly influenced by quality and quantity of water from tributary rivers. Land use in those tributary watersheds directly impacts the quality and quantity of water these tributaries provide to the Mississippi Sound and the Gulf of Mexico. The Natural Resources Conservation Service recognized this inland/coastal linkage by including the Jourdan River in its Gulf of Mexico Initiative. Mississippiâ€™s Bay of St. Louis and its two tributaries the Jourdan and Wolf Rivers offers an ideal ecosystem for a tributary water quality and quantity restoration program. The area is large enough to measurably contribute to restoring and protecting water quality in Bay of St. Louis Bay, the Mississippi Sound and the Gulf of Mexico, yet a small enough to effectively monitor those benefits. The heath and expansion of the oyster population in the Bay will be the ultimate measure of the programs success. The program area blends urban, suburban, exurban and rural land uses that is fairly typical on the Gulf Coast. In addition to waterfront residential developments, cities on and near Bay of St. Louis have traditional working waterfronts that support various small shops, restaurants, marinas, commercial docks and industries vital to the local tax base and economy. The Mississippi Department of Marine Resources (DMR) Coastal Preserves Program has three (3) Gulf Ecological Management Sites (GEMS) in the Bayâ€™s estuaries; a) Jourdan River Preserve (6,423 acres), b) Bayou La Croix Preserve (1,478 acres) and c) Wolf River Preserve (2,462 acres). Part of the Hancock County Marsh GEM is also in the program area. DMR identified septic systems a s a major threat to the ecological function of each of these GEMS. Over time, many of the Bayâ€™s bayous and creeks became clogged with debris which traps sediments and may disrupt estuaries salinity levels and impair water quality. Finally, in 2015 The Nature Conservancy completed Watershed Management Plans in the program area: 1) Devils Swamp-Bayou La Croix, 2) Lower Bayou La Croix, 3) Phillips Bayou, 4) Magnolia Bayou, 5) Watts Bayou, and 6) Bear Point Bayou. Moving inland, land use changes to smaller communities and more agriculture. There is an emerging Upper Bay of St. Louis Watershed Partnership organizing management efforts in several watersheds in Hancock County that discharge into Bay of St. Louis. The Wolf River was Mississippiâ€™s first designated Scenic Stewardship Stream. The Wolf River Conservation Society, a non-profit organization created to conserve, manage and protect the Wolf River, has protected 2,950 acres in the Wolf River watershed. There is more residential development and agriculture in the Jourdan River watershed with documented failing septic systems and inadequate wastewater collection and treatment. The Pat Harrison Waterway District (PHWD) proposes to expand its successful cooperative approach with County and City governments to the Jourdan/Wolf River Basin. The PHWD	Hancock, Harrison, Pearl River, Stone and Lamar Counties	Yes	No	No	No	No	Yes	No		No		$ 17,500,000.00	$ -	
New	Research and Education	5877	4/16/2019	Coastal Environment Land Protection	The Land Trust for the Mississippi Coastal Plain (LTMCP) is an accredited Land Trust dedicated to the conservation, promotion, and protection of open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. LTMCP utilizes both fee simple and conservation easement tools in conserving land for the benefit of habitats, species, and recreation. The Land Trust holds a conservation easement on approximately 18 miles of the Wolf River North of I10 in partnership with The Wolf River Conservation Society (WRCS). WRCS is a non-profit corporation dedicated to conserving, managing, and protecting the Wolf River and its watershed from its headwaters in Lamar County to its termination at the Bay of St. Louis. The State of Mississippi has classified the entire length of the Wolf River as a Fish & Wildlife stream to protect recreational use and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The Wolf River is also Mississippi's first scenic stewardship stream. The goal of this project is to establish funding to purchase individual parcels of land totaling Â–428.5 acres, located in areas identified as crucial to connecting continuing corridors of conservation land. The Wolf River Conservation Society has identified these sites based on locations that would expand conservation corridors previously established by the State of Mississippi, North of I10, in Harrison County which total approximately 1320 acres managed by the Mississippi Department of Wildlife, Fisheries, and Parks. These properties are all tidally influenced, and consist of both estuarine marsh and bottom land hardwood habitats. Ecological Value: •Protects properties as a buffer area for storm surge by providing dispersal and displacement in the event of flooding waters. These flooding waters have a natural function of turnover and flushing of coastal wetlands. •Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. •Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. •Establishes a protected nursery ecosystem for marine life. •Opportunities for low impact recreational activities such as kayaking, bird watching, fishing, and other wildlife observation •Extends and connects corridors of conservation land.	Harrison	Yes	Yes	Yes	Yes	No	Yes	No		Yes		$ -	$ -	Land Acquisition
New	Research and Education	5885	5/2/2019	Development of	The ARC will build the body of knowledge around the growing One Health movement, a collaborative effort of multiple health science professionals â€“ veterinary medicine, human medicine, environmental, wildlife and public health â€“ to attain optimal health for people, animals, wildlife, plants and our environment. By exploring the connection between health and the environment, this interdisciplinary approach can help protect present and future generations. Over the last three decades, approximately 75% of new emerging infectious diseases have been zoonotic, meaning the diseases have been transmitted from animals to humans. Research that studies the link between human, animal and environmental health is critical to our future, yet much of the work in this area has been focused on terrestrial species. By exploring the connection between health and the environment, The ARC can help protect present and future generations. Given the centrality of water to human life, and the great diversity of species and habitats our ocean supports, there is an urgent need for research focused on aquatic ecosystems. Not only will this research lead to a greater understanding of the public health risks of contaminated seafood, beaches and water, but it could also lead to new treatments and medicines that are marine based. This space will provide opportunities to partner with Mississippi's higher educational institutions such as USM Educational Program, USM Marine Research Center, MSU Veterinary Program, MGCCC Veterinary Technician Training Program, as well as creating opportunities at the high school level.	Harrison	Yes	No	No	Yes	Yes	No	Yes		Yes		$ 2,500,000.00	$ -	
New	Research and Education	5896	10/7/2019	STORM SURGE BARRIERS FOR BAY ST. LOUIS & BILOXI BAY	I HAVE A NEW CONCEPT FOR THE DESIGN AND CONSTRUCTION OF HURRICANE STORM SURGE BARRIERS, BARRIERS THAT ARE SPECIFICALLY DESIGNED FOR OUR UNIQUE BAY MOUTHS. i HAVE THE APPROVAL OF THE CONCEPTS BY CLARK STANAGE, WHO IS THE LEAD WATER CONTROL ENGINEER FOR THE WEST COAST US ARMY CORPS OF ENGINEERS, AND HAS BEEN SO FOR THE PAST 30 YEARS. HIS HOME PHONE # IS (916) 487-5215. MY BARRIERS ARE A SERIES OF ISLANDS ACROSS THE BAY MOUTHS. SEPARATING THE ISLANDS ARE CONCRETE CULVERTS, WITH FLAT BOTTOMS FLUSH WITH THE BAY FLOORS. THEY HAVE VERTICAL SIDES, NO TOPS. HINGED TO THE SIDES OF THE CULVERTS ARE STORM SURGE BARRIER GATES, similar in concept to cattle gates across a road. THESE GATES ARE NEVER CLOSED, EXCEPT DURING A HURRICANE OR A HIGH-FLOODING TIDE. AS A STORM SURGE APPROACHES OUR BAYS, AND THE SS WATER LEVEL GETS 9" HIGHER THAN A HIGH TIDE, THE GATES START TO FLOAT, AND THE INCOMING WATER CLOSES THEM. TO A VEE, NOT A WALL. A VEE SIMILAR TO THE BOW OF A SHIP, WHICH WILL BREAK UP THE SMASHING WAVES. THE STORM SURGE HIGH WATER HOLDS THE GATES CLOSED, THEY ARE NOT LOCKED CLOSED. WHEN THE SS GOES DOWN, THE HIGHER WATER INSIDE THE BAYS BLOWS THE GATES BACK OPEN. OTHER DETAILS PROVIDE FOR SHIPPING LANES, AND RAILROAD BRIDGES. i AM CURRENTLY WORKING WITH GULF COAST PRESTRESS FOR THE CONCRETE CULVERTS, AND TALKING TO ENGINEERING COMPANIES FOR THEIR ASSISTANCE. FURTHER PLANS AND LOCATION DRAWINGS ARE AVAILABLE ON REQUEST.	HARRISON, JACKSON, HANCOCK	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes	COMPLETE PROTECTION FROM STORM SURGE	$ 100.00	$ -	

New	Research and Education	5897	1/24/2020	Walter Anderson Museum of Art Creative Complex	The Walter Anderson Museum of Art requests $1,554,000 for Phases 2-4 of the Creative Complex, a campus expansion for coastal discovery and innovation, public access, and quality of life empowered by immersion in the natural world. The Creative Complex, a combined 15,000 square feet of interior and exterior spaces and public gardens, will be a center of education and recreation where visitors make connections to 21st century landscapes and applications, including those in science and technology, aquaculture and foodways, tourism, environmental stewardship, and restoration. The purpose of the project is to cultivate lifelong curiosity and connection to place through the convergences of culture, economy, education, and the environment. As American author Wendell Berry writes, â€œNeither nature nor people alone can produce human sustenance, but only the two together, culturally wedded.â€ Art, as a force for meaning-making and cultural resonance, is critical to the story of the Gulf Coast's resiliency. Walter Anderson's art contributes to the region's public education systems, tourism and community development, and conservation efforts. His studies of flora, fauna, and landscapes â€“ and his history of exploring the barrier island wilderness â€“ provide points of ignition for recreational and research-based programs that connect communities to their estuarine landscapes, as well as to the urgent need to study and protect them. WAMA's partners in science and restoration, including The University of Southern Mississippi Marine Education Center and the Grand Bay National Estuarine Research Reserve, are looking to art to communicate about complex systems. â€œOur goal is conservation, but conservation is complicated,â€ says Dr. Ayesha Gray of the Grand Bay NERR. â€œConnecting nature, art and science is part of the heritage of the Gulf Coast and that legacy is exemplified by Walter Anderson's work,â€ says Kelly Lucas, Ph.D., Interim Associate Vice President for Research of Coastal Operations and Director of the Thad Cochran Marine Aquaculture Center at The University of Mississippi. â€œ[Walter] Anderson is THE artist of the Gulf of Mexico,â€ writes Jack E. Davis in his Pulitzer Prize-winning environmental history, 'The Gulf: The Making of an American Sea.' Anderson's journeys to the federally-designated wilderness of Horn Island from the 1940s through 1960s exposed him to its biodiversity and its scientific and geographical importance. He depicted its	Jackson	Yes	No	Yes	Yes	Yes	No	Yes	70	Yes		$ 2,500,000.00	########	
New	Research and Education	5993	7/20/2021	Jackson County Septic System Abatement Project - Phase 2	Extension of sewer collection systems to underserved areas of Jackson County including Vancleave, Hurley, Three Rivers, & Helena Areas while allowing for the conversion of approximately 900 residences from on-lot septic systems to public systems at no cost to the resident. Converted on-lot systems would be owned and maintained by JCUA.	Jackson	Yes	Yes	No	Yes	No	No	Yes	100	Yes		$ 4,500,000.00	$ -	

PROJECT CATEGORIZED TO BROADER PROGRAMS OR WRITTEN TOO BROAD TO IMPLEMENTED (GREEN CELLS)

Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_ACT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	SEAFOOD	SMALL BUSINESS	TOURISM	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
Research and Education	1593	8/19/2011	The Gulf Restoration Fund	(ORIGINAL ID#887) The Gulf Restoration Fund supports organizations and individuals working on the restoration of the coastal and marine ecosystems of the Gulf of Mexico. The Gulf of Mexico is the ninth largest body of water in the world and home to over 15,000 different species of plants and animals. While the damages and impact of the BP Deepwater Horizon explosion and subsequent spill are still being assessed, this fund focuses on the other 80% of the Gulf that has been destroyed by decades of coastal development projects, agricultural runoff, overfishing and pollution.	n/a	Yes	No	No	No	No	Yes	No		No		$ -	$ -	