SEAFOOD RESTORE SUBCOMMITTEE

This is the portal list of projects tied to Seafood 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 (BLUE column) represents Seafood

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

Seafood_PARED represents a pared 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	SEAFOOD	SMALL BUSINESS	TOURISM	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Seafood	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	No	No	No	Yes	No		No	Yes		0	0	
	Seafood	10	10/18/2013	Offshore Reef Restoration, Establishment and Monitoring	MGFB has been organized since 1969. We are a nonprofit group run entirely by volunteers. Our only goal is to build artificial reefs off the coast of Mississippi. In addition we moniter these reefs monthly to assess their viability and productivity as well as take periodic water samples to gauge Dissolved Oxygen content and contaminants. We continuously publish these findings on our website (MGFB.org)and have done so for 12 years. In addition we include numerous High Resolution photographs and video. We are the only organization to do so, including the Mississippi Department of Marine Resources. MGFB is the permit holder for fourteen (14) approved reef sites. We have worked hand in hand with the MDMR since their inception. Together we have established an extensive reef system both within state waters and federal water off the coast of Mississippi. Unfortunately, we rely entirely upon donations. Since Hurricane Katrina these revenue streams have dried up. Any funding received from the Restore Act would be used exclusively for the construction and monitoring of additional reefs on our permitted sites. We have little to no overhead since we are volunteers. Our financial statements and monthly minutes can be found on our website. We pride ourselves om being good stewards of not only the environment but our financial resources as well. The habitat provided by these reefs greatly enhances the marine fisheries in our coastal waters. This has a direct and positive effect on many different aspects of fishing and diving in South Mississippi. This includes individual, commercial and licensed charter fisherman. Additionally, this extends to local businesses such as marinas, bait, tackle and ice sales and boat and fuel sales. Our oganization has a long track record of being good stewards of the resources allotted to us. We will continue in that vein with any funds received as a result of this request.	Hancock Harrison, Jackson	Yes	Yes	Yes	No	Yes	Yes	10	Yes	No		1000000	50000	
	Seafood	21	10/18/2013	Gulfport VA inshore reef enhancement	The Gulfport VA reef is a productive inshore reef. It could be greatly improved and restored by adding more quarry stone and surrounding it with a zigzag breakwater rock pile. According to research, taller reefs attract a greater variety of fish species. The Katrina reef in Biloxi has proven to be a success. Gulfport needs a breakwater reef. With the increasing popularity of kayaks and other small boats this would be a draw for them. The addition of oyster beds in the area would also improve water quality which is a constant issue in this location as well as others where drains empty into the gulf. Use plant material around drains to act as natural water filters. The planting of marsh grass in the protected areas of the breakwater would also filter the water and act as breeding areas for sea life. Add additional marsh grass along the existing jetty by the boat ramps.	Harrison	Yes	No	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	23	10/20/2013	Beach & Marsh Restoration	Planting marsh grass from Hwy 90 to the off shore islands in the MS Sound from New Orleans to Mobile. Allowing for beach spots placed where parking is now available so that less "imported" sand would be used would eliminate having to remove so much sand from the roads saving millions in maintenance per year. Planting the marsh in a staggered pattern running parallel to the beach would allow for boat passage, help with storm surge, protect the beach from the wind, provide estuary for animal and plan life, increase production of all forms of seafood, increase production of seafood industry, clean the water of pollution, make our beaches safer, cleaner, and more beautiful, provide sanctuary for all types of birds, and would increase revenues from tourism and provide fresh clean seafood for our many wonderful restaurants. Such a project would be a WIN, WIN, WIN situation for all of the Gulf Coast in the MS Sound all along the Gulf Coast.	Hancock Harrison, Jackson	Yes	No	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	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	Yes	Yes		Yes	No		4881792	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	20	Yes	No		7350000	0	
	Seafood	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	No	Yes		Yes	Yes	commercia	3500000	0	
	Seafood	98	11/30/2013	Artificial Reefs	I have been propagating fin fish in front of my house for 15 years prior to Katrina on an artificial reef in front of my house. My stock matures quicker and spawns sooner than the natural stock. I'll be happy to pass my information on to the state. All I ask is that the state assign me a biologist to monitor the results and if satisfactory to MDEQ, the results can be easily and cheaply duplicated.	Harrison	Yes	No	No	No	Yes	No		No	No		0	0	

	Seafood	108	11/14/2013	Comprehensive Water Quality Enhancement Program in the Mississippi Gulf Coast Region	The Mississippi Gulf Coast Region Utility Board (the â€œBoardâ€) respectively presents to the Mississippi Department of Environmental Quality (MDEQ) this proposal to fund a comprehensive water quality enhancement program in the Mississippi Gulf Coast region through the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (the â€œRESTORE Actâ€) 33 U.S.C. Â§ 1321. Background The Board was created pursuant to the Gulf Coast Region Utility Act (the â€œActâ€) Miss. Code Ann. Â§ 49-17-701, et seq., as a forum for the six county utility authorities in the Mississippi Gulf Coast region to collaborate and cooperate regarding, among other things, water, wastewater and storm water issues; to assist in the efficient management of water, wastewater and storm water resources; to develop recommendations pertaining to water, wastewater and storm water systems; and to provide assistance, funding and guidance to the member county authorities to assist in the identification of the best means to meet all present and future water, wastewater and storm water needs in the Mississippi Gulf Coast region. Following Hurricane Katrina, Mississippi Governor Haley Barbour designated $655.7 million of the United States Department of Housing and Urban Development's Community Development Blog Grant (â€œCDBGâ€)funds that Mississippi received for water, wastewater, and storm water infrastructure improvements through the Mississippi Gulf Coast Regional Infrastructure Program (the â€œProgramâ€)and the Mississippi Department of Environmental Quality (â€œMDEQâ€)as the agency responsible for accountability of funds, technical oversight, and project management for the Program. Funding under the Program was utilized for projects by the county utility authorities for five of the six counties in the Gulf Coast region (Pearl River, Stone, Harrison, Jackson, and Hancock Counties), with George County opting out of the Program. Under the Program's Action Plan, the objective was to identify the most critical needs in water and sewer infrastructure in the Gulf Coast Region and to prioritize and implement projects to meet those needs. Projects under the Program provide a backbone for many existing water systems to provide water in the event of future storms and consolidation of wastewater treatment. Water Quality Concerns and Needs Unfortunately, certain activities under the Program's Action Plan were not eligible for CDBG funding. Accordingly, numerous subdivisions and communities throughout the five participating counties in the Gulf Coast region remain unconnected to new wastewater treatment facilities and rely on decentralized, onsite, malfunctioning septic systems that cannot be repaired or replaced with a functioning onsite sewage disposal system due to the high seasonal water tables and poor soil conditions. The failing septic systems discharge raw sewage and effluent with polluting concentrations exceeding established water quality standards into subsurface and surface waters, contributing significant amounts of pollutants, especially nitrogen and microbiological pathogens. Consequently, excessive nitrogen discharges to sensitive coastal waters and phosphorus pollution of inland surface waters, which increase algal growth and lower dissolved oxygen levels, as well as the contamination of important shellfish beds and swimming beaches by pathogens. Most of the rivers and bayous in the Gulf Coast Region are already on Mississippi's Section 303(d) List of Impaired Water Bodies, which include stream reaches, lakes, water body and water body segments with chronic or recurring monitored violations of the applicable water quality criteria where required pollution controls are not sufficient to attain or maintain applicable water quality standards. Proposed Water Quality Enhancement Program The only viable solution to this precarious situation facing the Mississippi Gulf Coast is to establish a comprehensive water quality enhancement program to implement a collection system infrastructure to pump the raw sewage in these unconnected neighborhoods and communities to the new wastewater treatment facilities for treatment and disposal. Such a program is an ideal fit for funding under the RESTORE Act, which has the statutory purpose of supporting programs aimed at helping the Gulf Coast region recover from environmental and economic injuries experience as a result of what is	Pearl River, Stone, Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	Yes	90	Yes	No		994400000	0	
	Seafood	1147	7/12/2011	Restoring Finfish of Importance to the Northern Gulf of Mexico	(ORIGINAL ID#601) Aqua Green, LLC is an established aquaculture firm located in Perkinston, MS. The company is involved in production of freshwater and marine finfish for food as well as for restoration purposes. The following juvenile marine finfish species can be produced by Aqua Green to help restore northern Gulf of Mexico coastal waters (prices/species available upon request): red drum (Sciaenops ocellatus), spotted seatrout (Cynoscion nebulosus), cobia (Rachycentron canadum), southern flounder (Paralichthys lethostigma), Florida pompano (Trachinotus carolinus), and Atlantic croaker (Micropogonias undulates). In addition to the company's operational status with completed facilities, Aqua Green has established working relationships with the following partners: Auburn University, Gulf Coast Research Laboratory, Louisiana State University, Louisiana Universities Marine Consortium, Mississippi Dept. of Marine Resources, Mississippi State University, Mote Marine Laboratory, Southern University, and USDA. Aqua Green can provide immediate impact to the restoration of finfish of importance to northern Gulf of Mexico inshore and nearshore waters.	Hancock Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		5000000	0	
	Seafood	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 S 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 S 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	No	Yes	No	Yes	Yes		Yes	Yes		4300000	0	
	Seafood	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	No	Yes	Yes	Yes		Yes	No		8500000	800000	
	Seafood	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	No	Yes	No	Yes	Yes	100	No	Yes		7200000	0	
	Seafood	1186	8/19/2011	County Fishing Pier near Biloxi Bay Bridge	(ORIGINAL ID#852) This project consists of extending the County fishing pier near Biloxi Bay Bridge on longer concrete pilings ($200,000). Project mobilized; immediately shovel ready. This project ties in to walking path on Front Beach and parking for ideal access to Biloxi Bay and Mississippi Sound. It is a site of children's fishing rodeos.	Jackson	Yes	No	Yes	No	No	Yes		No	No		200000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		800000	0	

	Seafood	1199	3/6/2012	Oyster, Fish, Habitat and Water Quality Monitoring associated with Oyster Cultch Restoration and Artificial Reef Project	(ORIGINAL ID#11647) Eco-Systems, Inc. (Eco-Systems) is pleased to provide this proposal to conduct baseline conditions sampling and on-going monitoring activities associated with the restoration of 1,430 acres of oyster cultch and the creation of 100 acres of artificial reefs. Eco-Systems proposes to complement and enhance on-going DMR/DEQ coastal restoration efforts and support the currently approved BP Early Restoration Projects as identified below. Eco-Systems proposes to monitor oysters, fish, habitat, and water quality before, during and after the restoration of the 1,430 acre oyster cultch restoration project and the expansion of 100 acres of nearshore artificial reef. This monitoring effort is designed to complement the DMR projects and on-going oyster and artificial reef monitoring efforts currently in place in coastal Mississippi. The data collected will be utilized to establish baseline conditions and to monitor trends at both oyster restoration and artificial reef project locations. Creation of oyster beds and artificial reefs have been linked to improved water quality and critical fish habitat. The proposed scope of work will strengthen these claims by providing "hard data" to support the theory of improved conditions in Mississippi coastal waters. It would be our hope to use the analytical results to demonstrate if water quality improvement can be tied to the restoration efforts; to document the growth, health and survival of oysters in newly created beds; to record the anticipated increased diversity and density of fish in the restored and created artificial reefs; and to demonstrate the improvement in overall fish/oyster habitat in coastal waters of Mississippi. Scope of Work: Two project tasks are proposed: (1) an initial assessment to establish baseline conditions and (2) on-going monitoring for ten years (quarterly monitoring for two years to determine seasonal variations; semi-annual basis for an additional three years; and annual monitoring for an additio nal five years). The objective of the proposed monitoring efforts is to establish baseline conditions and document anticipated improved coastal conditions over time such as improved water quality, oyster population, fish diversity/density, and habitat. The following scope of work is proposed and identified as separate Phases: Phase 1: Review Background Information. a. Obtain site drawings and background information. b. Obtain information on location and condition of oyster beds and reefs from DMR. c. Obtain best available imagery of sites. d. Identify dominant species at project sites and determine the typical range of tolerance. e. Contact Gulf Coast Research Laboratory to obtain relevant site information pertaining to biological and physical characteristics of areas. f. Contact MDEQ and request their available sampling data and analytical results for the coastal project areas. Phase 2: Initial Field Investigation and Preparation of Sampling Plan. a. Schedule field visit in coordination with DMR and DEQ. b. Conduct visual assessment of general site conditions. c. Identify monitoring locations representative of overall site conditions. d. Prepare sampling plan and submit to DMR/DEQ for concurrence and approval. Phase 3: Conduct Assessments (Baseline Sampling and On-going Monitoring) a. Fish Monitoring at Identified Sampling Locations at 100 Acres of Nearshore Artificial Reefs: The Eco-Systems team will sample baseline conditions of fish and shellfish at the artificial reef locations and provide on-going monitoring at the sample locations identified during the initial baseline assessment event to document fish/shellfish use of reefs over time. The scope will include fish and shellfish assessment and water quality sampling at designated sampling locations specified within sampling zones. Sampling zones will be discussed with and approved by DMR and DEQ prior to mobilization. Eco-Systems recommends monitoring fish diversity, density and size utilizin g sampling methods to include use of: gill nets, trawl nets, cast nets, and hook-and-line. Water quality will also be determined at each of the sampling locations. A collection permit will be obtained prior to mobilization. The primary target species to monitor will include: - Atlantic croaker (Micropogon undulates) - Speckled trout (Cynoscion nebulosus) - Black drum (Pogonias cromis) - White trout (Cynoscion arenarius) - Speckled trout (Cynoscion nebulosus) - Red drum (Sciaenops ocellata) - Sheepshead (Archosargus probatocephalus) - Southern kingfish (Menticirrhus americanus) - Pinfish (Lagodon rhomboids) - Naked goby (Gobiosoma bosci) - Blue crab (Callinectes sapidus) - Striped blenny (Chasmodes bosquianus) - Stone Crab (Menippe adina) - Oyster toadfish (Opsanus tau) - Eastern oyster (Crassostrea virginica) - Skilletfish (Gobiesox strumosus) - Shrimp (variety of species) b. Oyster Monitoring at Identified Sampling Locations within the Restored/Created 1,430-acre Oyster Bed: The Eco-Systems team will sample baseline conditions of oysters at identified sample locations within the 1,430-acre oyster restoration area and will provide on-going monitoring of oysters over time. Eco-Systems team will utilize a modified Sampling Protocol for Projects in Public Oyster Areas from Louisiana. The following tasks are proposed: i. Sample oyster presence/absence, density (via square meter	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		2500000	0	
	Seafood	1205	4/25/2012	Continued Shrimp Fishing Effort Data Collection Through the Use of an Electronic Logbook System in the Gulf of Mexico	(ORIGINAL ID#11685) Because the red snapper stock of the Gulf of Mexico is classified as overfished, the National Marine Fisheries Service has regulated the directed commercial (IFQ system) and recreational (size and trip limits and closed seasons) red snapper fisheries to reduce mortality of large juvenile and adult fish. To reduce the fishing mortality of small juvenile fish, the NMFS has also regulated the shrimp trawl fishery; a fishery that is thought to bottleneck adult populations. Disagreement has existed regarding the magnitude, age composition, and monthly distribution of shrimp trawl red snapper bycatch in time and space. The Foundation completed a research study that augmented the collection of electronic logbook (ELB) data through the use of observers in the fishery. The goal was to enable the fishing industry to evaluate and address fishery management issues, including the estimation of shrimp fishing effort and bycatch. The ELB was developed by LGL Ecological Research Associates, Inc., to directly measure shrimp fishing effort, thereby reducing the dependence on modeling to provide better estimates of effort and red snapper bycatch. Over the course of a 3 year pilot study, ELB systems were placed onboard commercial shrimp fishing vessels to collect fishing effort data. Results from this study indicated that the ELB system accurately estimated the fishing practices of a vessel on a per trip basis and that individual tows could be identified. Currently, shrimp fishing effort data recorded by ELBs are used as a proxy for estimating red snapper bycatch mortality in the offshore shrimp fishery. We propose to continue the Foundation's ELB observer program that collects data with the ELB system and observers to make the results of the previous work more robust. Importantly, this will increase the data available to verify models used by scientists to compute red snapper bycatch levels within the fishery. Specifically: 1) Complement an electronic logbook (ELB) study with onboard observers to collect data on fishing effort, red snapper bycatch, and shrimp landings within the Gulf of Mexico; 2) Analyze all observer collected data to further ensure that ELB landings estimates are accurate and defensible; and 3) Determine the spatiotemporal abundance of juvenile red snapper, compute a total mortality (Z) estimate for shrimp-trawl red snapper bycatch, and conduct a formal cohort analysis (VPA) on all observer collected red snapper data. The ELB program is vital to managing the shrimp and red snapper fisheries in the Gulf and needs to be continuously funded, especially as the impacts of the Deepwater Horizon oil spill become better understood.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		500000	0	
	Seafood	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	No	No	No	No	No		No	Yes		750000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1500000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		60000000	0	
	Seafood	1240	9/26/2011	Water Quality, Flood Minimization, Access, Shoreline Protection and Sediment Removal in Various Bayous	(ORIGINAL ID#11186) This project would consist of flood minimization, removal and disposal of obstructions, improve water quality, stabilize shoreline, sediment removal, increase access to natural resources, improve storm water runoff, reduce flooding and improve fisheries, marine and wildlife habitats. The bayous and watersheds areas involved with proposed costs are: Community Ave/Bayou Yazoo Watershed ($88,000.00) Pascagoula Upper Bayou Casotte Drainage Area ($808,000.00) Pascagoula 11th Street/Parsley Street Watershed ($972,514.00) Pascagoula Inner Harbor/Lake Yazoo ($2,894,000.00) Pascagoula Bayou Chicot Watershed Area ($825,000.00) Pascagoula Canty Street Bayou ($1,260,000.00) Pascagoula Point Clear Watershed ($1,549,000.00) Gautier Hickory Hills Watershed ($1,458,000.00) Gautier Glenn Heath/Holly Heath Watershed ($92,000.00) Gautier Rolling Meadows Watershed ($160,000.00) Gautier De La Pointe/Frenchmans Dr. ($91,330.00) Gautier Bayou Pierre/Italian Isle Watershed ($1,031,000.00) Gautier	Jackson	Yes	No	Yes	No	No	Yes		No	No		3396087	0	
	Seafood	1241	9/26/2011	Channel Protection, Graveline Bayou Jetty	(ORIGINAL ID#11185) This project would consist of the construction of a new jetty providing protection to the channel, increase access for commercial and recreational fishermen. Increase access to the natural resources of the area. This project would help keep the movement of sand from impacting the channel. The Jetty would parallel the channel.	Jackson	Yes	No	Yes	No	No	Yes		No	No		2022300	0	
	Seafood	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	No		Yes	Yes		0	0	

	Seafood	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	No	No	No	No		Yes	Yes		0	0	
	Seafood	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, Jackson	Yes	Yes	Yes	Yes	Yes	No		Yes	No		0	0	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		51535865	0	
	Seafood	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 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	No	No	No	Yes	No		No	Yes		4900000	0	
	Seafood	1286	12/20/2013	Restore and Re-populate Addressing Potential Impacts of the Deepwater Horizon Oil Spill to Fishes in Coastal Mississippi Rivers	Coastal streams in Mississippi flow through many miles of urban and suburban areas, longleaf pine forests, agricultural lands, ancient bottomland hardwood forests and cypress swamps and empty into a network of marshes and lakes and the Mississippi Sound. They are home to many species of wildlife, including migratory birds that winter in South America as well as several threatened and endangered species of fish. Fish, such as Gulf Striped Bass, Morone saxatilis, travel coastal stream waters to the Gulf of Mexico and return to the rivers to spawn. These rivers provide vitally important spawning and post-spawning habitat for Striped Bass and other species. Freshwater fish, such as the Largemouth Bass, Micropterus salmoides, Spotted Bass, Micropterus punctulatus, (species of black bass)and several sunfish species, Lepomis spp., and crappie, Pomoxis spp. provide the driving force of the freshwater fishing activities of Gulf anglers. All of the coastal river systems are important and include the Pascagoula River watershed described as the last unimpeded system in the continental United States and the closest we have at least in the lower 48 states to a natural paradise by Dr. Bailey Thomson, University of Alabama; the lower Pearl River which serves as the 116-mile boundary between Mississippi and Louisiana; and, the Coastal Streams like the Jourdan, Wolf and Tchoutacabouffa Rivers and numerous bayous. Statement of Need The Gulf Oil Spill affected important estuaries and open waters that serve as habitats for fish throughout their life cycles. Gulf Striped Bass are a recreationally and economically important throughout the Coastal counties and this species occupies affected habitats. MDWFP proposes to repopulate Striped Bass populations and augment populations of black bass and sunfishes in these impacted river systems through the methods outlined below. Expansion of Turcotte Fish Hatchery, in Canton, will be necessary to provide advanced sized fingerlings for the coastal streams. An additional hatchery employee will be needed to address the increased workload. Methods --Repopulate Fish Populations of Conservation Concern -Determine relative abundance and age structure of Gulf Striped Bass populations in the Pearl, Pascagoula the Jourdan, Wolf and Tchoutacabouffa Rivers. -Improve fish production capacity at Turcotte Fish Hatchery near Canton, MS, for increased production of Gulf Striped Bass, black bass and selected sunfish. -Produce advanced fingerling black bass, and selected sunfish at to enhance populations of game fish in the coastal streams. Monitoring and Evaluation -Collect biological data on existing Gulf Striped Bass populations in coastal rivers. -Collect biological data on existing Largemouth Bass, Spotted Bass and sunfish populations in coastal rivers.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No		Yes	No		5500000	0	
	Seafood	1572	6/22/2011	Sub tidal oyster reef restoration in Biloxi Bay, Mississippi	(ORIGINAL ID#216) The sub tidal oyster reef habitats in coastal Mississippi have been degraded over time due to poor riverine water quality, questionable land use practices in watersheds, shoreline hardening and natural processes such as hurricanes. Substantial expanses of suitable bottom area exist in all Mississippi bays and estuaries. The proposed project will construct oyster reef habitat using natural oyster shell, on suitable water bottoms. Careful scientific monitoring will document long term success. Restoration of oyster reefs in Biloxi Bay began in 2007, with the construction of a 10 acre pilot project. The reef was later expanded to 22 acres. Suitable water bottoms exist in the Bay for further restoration. TNC has requested additional funding from FishAmerica to add an additional 10 acres of reef. Project time line: Permitting and project design: July 2011 Pre deployment sampling: October 2011 Contracting: December 2011 Reef construction: May 2012 Post construction monitoring: until May 2017 When compared to other areas, Mississippi's oyster reefs are in fairly good condition, but significant losses have occurred. Restoration of sub tidal oyster reefs produces increased biomass and species diversity, along with a shift to important sport fish, including spotted sea trout, white sea trout, black drum, and southern kingfish (ground mullet). Resident and migratory shorebirds will also benefit. It is unlikely that restored oyster reefs in Bay St. Louis will have any effect on state or federal listed species.	Harrison	Yes	No	No	No	Yes	No		No	No		875000	0	

	Seafood	1573	6/22/2011	Sub tidal oyster reef restoration in Bay St. Louis, Mississippi	(ORIGINAL ID#217) The sub tidal oyster reef habitats in coastal Mississippi have been degraded over time due to poor riverine water quality, questionable land use practices in watersheds, shoreline hardening and natural processes such as hurricanes. Substantial expanses of suitable bottom area exist in all Mississippi bays and estuaries. The proposed project will construct oyster reef habitat using natural oyster shell, on suitable water bottoms. Careful scientific monitoring will document long term success. Restoration of oyster reefs in Bay St. Louis began in 2007, with the construction of a 2 acre pilot project. In 2009, a larger, 14 acre project was constructed nearby. Sampling of both reefs in early 2011 showed that both reefs are fully functional, and contributing to the productivity and biodiversity of the Bay. Suitable water bottoms exist in the Bay for further restoration. TNC has requested additional funding from NOAA to add an additional 10 acres of reef. Project timeline: Permitting and design: July 2011 Pre deployment sampling: October 2011 Contracting: December, 2011 Reef construction: May 2012 Post construction monitoring: until May 2017 When compared to other areas, Mississippi's oyster reefs are in fairly good condition, but significant losses have occurred. Restoration of sub tidal oyster reefs produces increased biomass and species diversity, along with a shift to important sport fish, including spotted sea trout, white sea trout, black drum, and southern kingfish (ground mullet). Resident and migratory shorebirds will also benefit. It is unlikely that restored oyster reefs in Bay St. Louis will have any effect on state or federal listed species.	Harrison	Yes	No	No	No	Yes	No		No	No		375000	0	
	Seafood	1585	7/22/2011	Increased Catch and Effort Reporting for the Gulf of Mexico's Marine Recreational Fishery Based on 1-month waves	(ORIGINAL ID#648) Recreational anglers lost access to a considerable portion of federal and state waters in the northern Gulf that were closed to fishing during the BP oil disaster. Fishery closures amount to lost ecosystem services or human uses of resources that the Natural Resource Trustees are required to estimate and offset through appropriate compensatory restoration projects. One strategy for compensating the angling public for lost fishing access is making investments in fishery management tools that help keep fishery resources healthy and available to anglers. One such tool is the Marine Recreational Fisheries Statistics Survey (MRFSS), which collects data on recreational fisheries data used to estimate total catch. The public can be compensated for lost access to fishing grounds during the 2010 Deepwater Horizon BP oil spill by establishing a one month survey reporting waves versus the current two month reporting waves of MRFSS. A more timely reporting system would benefit the public by lowering the likelihood of overfishing and accountability measures (i.e., penalties), which if triggered, could result in a shorter fishing season. Increased data collection and reporting periods will lead to more precise and timely catch estimates. MRFSS in the Gulf of Mexico does not produce timely fishery catch and effort estimates required by managers. The MRFSS catch and effort estimates are based on a two month data collection waves with estimates produced up to 45 days after the end of a wave. For reporting to be on one month waves, with sufficient precision for management, an increase in sampling will need to occur. MRIP proposes to meet this goal; however a concurrent increased funding allotment has not been secured. Survey costs, on average, will need to double from the current level of funding. The National Research Council's 2006 Review of Recreational Fisheries Survey Methods, recommended for one month reporting of catch and effort estimates be implemented. The Marine Recrea tional Information Program (MRIP) is redesigning the MRFSS survey to accomplish this task. As an example, the red snapper season, as currently defined, closes well before the estimates are produced. The current estimation methodology has inadvertently allowed the recreational fishery to overharvest red snapper in twelve of the last twenty years, and has triggered fishery accountability measures; such as shorter red snapper seasons for recreational anglers. A timely and accurate recreational data reporting system will allow fishery managers to be proactive in the Gulf of Mexico, improving their ability to predict fishing trends and prevent overfishing.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		10000000	0	
	Seafood	1586	7/22/2011	Enhancements to marine charter for-hire fishing surveys	(ORIGINAL ID#667) Make enhancements to the charter for-hire telephone fishing effort survey for improving fisheries management. Link to Injury: Members of the public who hire charter boats to fish offshore lost access to a considerable portion of federal and state waters in the northern Gulf of Mexico that were closed to fishing during the BP oil disaster. Charter boats provide access to offshore fishery resources for members of the public who do not own vessels themselves. Benefit and Rationale: A telephone survey is the primary method used by fishery managers to collect charter for-hire fishing effort, which helps track quota usage. Making enhancements to the survey, such as increasing frequency and sample size, would result in more effective monitoring of fishing effort, improved management and possibly longer fishing seasons. Better data from enhanced telephone surveys would help fishery managers be more responsive and adaptive in their management of fishery species exposed to oil. Other: This project could be compensatory in nature if a reduction in fishing that anglers experienced in 2010 due to oil-related fishery closures is offset in the future by extending fishing seasons made possible through better (more accurate and precise) data on fishing effort. For example, an enhanced charter for-hire telephone survey in summer 2010 increased the precision of catch and effort estimates that allowed, in part, the red snapper fishery to reopen in the fall of 2010 after a summer closure.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No		No	No		5000000	0	
	Seafood	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 world's great seafood producers. Since it'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. Mississippi'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 region'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		7549904	0	
	Seafood	1597	9/7/2011	Sealife Hatchery	(ORIGINAL ID#1020) This project addresses the extensive damage done by the Deepwater Horizon event on natural resources, namely fish, oysters, and shrimp. Specifically, the project would establish hatcheries for fish, oysters, and shrimp. It would be funded for 20 years by a trust so that ongoing replenishment of seafood would be available to residents and attract visitors to the coastal area. Suggested locations consist of a site near Bayou Caddy, West Pearl River, or the Jordan River.	Hancock	Yes	No	Yes	No	Yes	No		No	No		0	0	
	Seafood	1601	9/12/2011	Enhancements to marine private recreational fishing surveys	(ORIGINAL ID#1094) Make enhancements to the marine private recreational fishing survey to improve timeliness and spatial resolution of catch and fishing effort data for better management. Link to Injury: Private recreational anglers lost access to a considerable portion of federal and state waters in the northern Gulf that were closed to fishing during the BP oil disaster. Therefore, the angling public must be compensated for lost access to fishing as a service. Benefit and Rationale: Improving the private recreational survey in the Gulf of Mexico will help keep fishery resources healthy and available to anglers. Specifically, improving the timeliness and spatial resolution of catch and effort data can help fishery managers keep total catch within prescribed fishing limits and prevent recreational anglers from exceeding their quotas and incurring penalties. These improvements would benefit the public by lowering the likelihood of overfishing and accountability measures, which, if triggered, could result in shorter fishing seasons in the future.	n/a	Yes	No	No	No	Yes	No		No	No		0	0	
	Seafood	1603	4/21/2011	BioRestore?	(ORIGINAL ID#2106) BioRestore? will contribute to help mitigating marine resource status quo. BioRestore? is a process based on the Capture and Culture of Post-larvae (PCC) marine animals. The idea is to effectively rescue a small proportion of post-larval fish before predation, then rear and release them to boost marine ecosystem recovery. Restocking can thus be achieved for a wide range of coastal fish species, and pre-release juveniles are conditioned to survive in the wild before restocking. We feed them on live food, and a patented halfway house is created placed in the nursery where the fish can become familiar with them. Pieces of the halfway house are then released in the same area as the fish, thus reducing stress and encouraging the juveniles to settle at that location. BioRestore? is a 3-step all inclusive marine restoration process in full accordance with the maritime status quo and the regulatory context. It simultaneously aims to monitor biodiversity losses, to mitigate impacts and help rebuild stock of local species. This process is being used in the Mediterannean sea.	n/a	Yes	No	No	No	Yes	Yes		No	No		300000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		60000000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		60000000	0	

	Seafood	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 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	No	No	No	Yes	No		No	Yes		2500000	0	
	Seafood	1612	11/21/2011	5-Year Increase in Gulf of Mexico Fishery Observer Coverage for Monitoring Marine Mammals, Sea Turtles, and Bluefin Tuna	(ORIGINAL ID#11523) Temporary (5-year) increase of vessel coverage for Gulf of Mexico shrimp trawl, shark gillnet and pelagic longline observer programs to quantify the extent to which marine mammal, sea turtle, and bluefin tuna bycatch mortalty is a source of stress on injured populations. Going forward, these data will shed light on whether bycatch mortality is limiting recovery from injury related to the BP oil disaster and help managers identify restoration measures that can be implemented to shorten recovery times. A temporary but significant increase in observer coverage in the shrimp trawl, shark gillnet and pelagic longline fisheries is needed to improve estimates of marine mammal, sea turtle, and bluefin tuna bycatch rates and mortality in these fisheries. Additional observer coverage and the resulting observational data will help scientists determine to what extent bycatch is a source of mortality and stress limiting recovery from DWH oil spill injuries. Additional biological samples gathered through observers could reveal lingering sub-lethal injuries resulting from oil exposure and help scientists detect impacts on marine mamma, sea turtle or bluefin tuna populations still recovering from the DWH oil disaster. In fishery observer programs around the country, biological samples (organs, tissue, etc) are collected from marine mammals and sea turtles incidentally taken in commercial fisheries. An increase in observer coverage in the Gulf would likely mean an increase in the number of samples for analysis of hydrocarbon and/or chemical dispersant signatures. These data would help scientists track effects at the genetic and population level and provide valuable information to guide restoration efforts. Together, bycatch and biological data will help inform additional restoration measures needed to help the recovery of affected species. A Gulf of Mexico fisheries observer program already exists, providing the organizational structure for additional monitoring of marine mamm al and sea turtle fishery interactions. Note that the estimated cost of $6.5 million is per year over five years. The estimated cost is based on the amount allocated to the Southeast Regional observer program in FY2009.	n/a	Yes	No	No	No	Yes	No		No	No		6500000	0	
	Seafood	1613	11/28/2011	Shrimp Restoration	(ORIGINAL ID#11531) We believe we have a very unique hatchery. We have been in the R&D stage for three years and believe we are the only commercial hatchery in the U.S. that has had success raising domestic shrimp at the hatchery level. As a Florida company, Scientific Associates is very concerned about the health of the gulf seafood industry including the fishermen, the processing plants, restaurants, and all those local businesses that depend on a thriving shrimp industry. Given the recent dramatic falloff in wild shrimp catch in the Gulf of Mexico, (which may or may not be related to the effects of the BP oil spill), there is a need to replenish the wild stocks in time for the 2012 harvest. Scientific Associates of Florida has perfected hatchery techniques so that they can produce hundreds of million of post larval shrimp (PL's, i.e. baby shrimp) , typically transported at the 10 days into the larval phase (PL10's). They have been raised in a closed, fully recirculating system that has now been in continuous operation for three years. There are no antibiotics used. The shrimp are free of disease. The PL's are first generation offspring coming from brood stock (mom and dad) taken directly from the Gulf of Mexico waters. With this technique, the shrimp can be raised in appropriate water conditions for the locations where they would be released, i.e. similar pH and salinity to maximize survival rates. This is an opportunity to restock the estuaries with hundreds of millions of viable larval shrimp and bring the Gulf shrimp industry back to health. This restocking program can be for a short duration or on-going. The available species are Litopenaeus setoffrus (gulf white shrimp) and Fartantepenaeus Duorarum (gulf pink shrimp). In order to change production to produce this product for Spring 2012, arrangements would need to be agreed fairly soon. Please feel free to contact me with any questions or suggestions and please feel free to pass this e-mai l along to appropriate individuals. Dave Brockwell President of Scientific Associates LLC 239-677-8914 or e-mail at dave@scientificassociates.us	n/a	Yes	No	No	No	Yes	No		No	No		0	0	
	Seafood	1618	2/7/2012	Upgrades to the Electronic Logbook Program for the Offshore and Inshore Commercial Shrimp Fishery for a 5-Year Period	(ORIGINAL ID#11609) Project: Upgrade the Gulf of Mexico shrimp fishery electronic logbook (ELB) program in order to improve the precision of shrimp fishing temporal-spatial effort and estimation of red snapper and sea turtle bycatch in the shrimp fishery. Specifically, this project will purchase new ELB units and make program enhancements necessary to expand ELB coverage up to 100 percent of the offshore shrimp fleet and a higher percentage of the inshore shrimp fleets for a period of 5 years. Link to Deepwater Horizon Oil Spill Injury: In 2010, the estuarine and offshore waters upon which shrimp species depend were oiled, offshore and nearshore shrimp fisheries were closed and visibly oiled sea turtles were collected alive and dead from northern Gulf. Sharp declines in shrimp catch in SE Louisiana in 2011 may be related to habitat damage or adult or post-larval mortality caused by exposure to Deepwater Horizon oil or chemical dispersants used to break up oil. In addition, red snapper with lesions and other signs of a compromised immune system have been documented in the oil spill impact area, though cause and effect are not yet established. Benefit and Rationale: Inshore and offshore shrimp fisheries in the Gulf of Mexico are known to interact with sea turtles and juvenile red snapper. These two species? populations may have been detrimentally affected by the DWH oil spill in 2010. Sea turtle strandings in the Gulf of Mexico increased significantly since 2010 and have continued to rise since the BP oil disaster. More than 5,000 dead or weakened turtles washed ashore, or have been stranded, since the BP oil disaster. More than 460 sea turtles were found visibly oiled during oil spill response efforts and an unknown number died as a direct result of the disaster. ELB analysis provides fine-scale spatial data that can help identify sea turtle/shrimp fishery interaction hot spots. These data can assist managers in reducing the number of interactions and related sea t urtle mortalities through such means as time/area closures while potentially avoiding broad management measures like complete fishery closure. Shrimp fishing effort data recorded by ELBs are also a proxy for estimating red snapper bycatch mortality in the offshore shrimp fishery. Bycatch mortality estimates are important for determining whether management measures are needed to help red snapper populations exposed to oil recover from potential injury. The long-term effects of oil and chemical dispersants on shrimp species or their habitat remain unknown. Tracking the location and catch per unit of effort of shrimp can help scientists and fishery managers better understand trends in abundance and possible relationships between areas of low catch and oiled estuarine habitats. Expanding ELBs to the entire offshore fleet and making them available on a voluntary basis to a greater portion of the inshore fleet will improve the precision of sea turtle bycatch estimates needed to facilitate and track recovery of impacted sea turtle populations in the Gulf of Mexico. The recent increase in offshore shrimp fishing effort and potentially higher number of sea turtle interactions that could result also underscore the importance of ELBs in estimating sea turtle bycatch for developing mitigation and recovery strategies going forward. Description: Implemented through a joint reef fish/shrimp management plan amendment in February 2008, a statistically valid sample of shrimp vessel permit holders are randomly selected and must report shrimp fishing effort via an ELB. A simple ELB that records spatio?temporal fishing effort is currently used by approximately one-third of the federally permitted offshore shrimp fleet. Researchers have found these devices to be a reliable method for estimating sea turtle interaction and red snapper bycatch mortality in the Gulf of Mexico offshore shrimp fishery. NOAA has been making the ELBs available to members of the inshore shrimp fleet. A bout 150 inshore shrimp vessels use ELBs on a voluntarily basis. Upgrading this program to expand coverage in the offshore and inshore fleets will generate a wealth of fine scale spatial data. These data will allow scientists to better characterize the shrimp fishery?s effort and classify overlapping areas of fishing effort in regards to sea turtle and juvenile red snapper habitat areas. Determination of where and when this fishery interacts with sea turtle and red snapper populations may allow more fine-scale management of the fishery (versus the need for broader management measures) while reducing bycatch mortality, which in turn would offset injuries caused by the oil spill and help affected populations recover more rapidly.	n/a	Yes	No	No	No	No	No		No	No		6650000	0	
	Seafood	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 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	No	No	No	Yes	No		No	Yes		2000000	0	
	Seafood	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	No	No	No	No	No		No	Yes		4800000	300000	
	Seafood	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	No	No	No	No	No		No	Yes		5000000	0	
	Seafood	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	Yes	No		Yes	No		2469200	0	

	Seafood	1695	2/11/2014	Pass Christian - Small Craft Harbor	1. DESCRIPTION: This project will consist of the replacement of an existing concrete bulkhead wall which forms the west wall of the Pass Christian Small Craft Harbor. The wall is approximately 755 linear feet long. The wall separates South Hiern Avenue from the small craft harbor basin. Inside the basin are piers used for commercial fishing and pleasure crafts, a restaurant establishment, an excursion pier used for commercial charter vessels. Small commercial fishing boats commonly use this area to offload seafood into trucks. The basic concept of the project is to construct an entirely new concrete wall just outside (toward the water) of the existing failing wall, as close to it as possible. After the new wall is complete and properly tied back, the space between the existing and new walls will be filled, and the top of the existing wall removed. A vicinity map is also attached, depicting the proposed project area. 2. EXISTING CONDITIONS: The exact age and character of the existing wall cannot be determined from available sources, but local residents have advised that it is approximately 60 years old. The cap wall of the existing wall has broken at many locations, allowing the concrete sheet piles to â€œleanâ€ but toward the harbor by amounts which vary from 0â€ to approximately 12â€. We have no information regarding how the wall was originally supported with a system of â€œtie-backs,â€ as would be normal for this type of wall. Backfill material is leaking through the open joints between the concrete sheet pile sections, as evidenced by numerous sinkholes behind the wall, which the city is continuing to backfill. 3. BENEFICIARIES: The designated beneficiaries for this project are the commercial fishermen who utilize the small craft harbor, charter fishing captains, recreational fishermen as well as the adjacent restaurant owner and those local residents who frequent the establishment and the seafood dealers and processors who occupy the leased parcels in the project area. As stated above in Section 1., the wall directly adjoins structures (i.e., pier used for mooring commercial fishing boats as well as offloading seafood from the wall; a restaurant; and, a pier used for mooring charter fishing vessels) used for commercial endeavors for approximately 60% of its length. It could therefore be argued that the commercial business enterprises collectively utilize 60% of the project, and the individual recreational fishermen utilize the remaining 40% of the project area. 4. IMPLEMENTATION: Preliminary engineering design and subsurface investigation have been completed. Final design will be undertaken when funding has been arranged, and should require approximately six months, including acquisition of environmental permits. Bidding and construction could realistically require an additional twelve months. It is proposed to implement the project by seeking competitive written bids from qualified contractors, based upon plans and a Project Manual prepared by the Consultants for the City. Because the City has some funds available through the Tidelands Trust Fund, a small section of the worst part of the failing wall has been completed and is going to be bid in the very near future. For the remainder of the project area, a single construction contract is contemplated, assuming that it can be fully funded, thus avoiding any future â€œphasingâ€ of the project. No â€œin-houseâ€ or â€œforce accountâ€ work is presently proposed.	Harrison	Yes	No	Yes	No	No	Yes	100	No	No		1868625	0	
	Seafood	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	15	Yes	Yes	Data need	5000000	0	
	Seafood	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	Yes	No		Yes	No		5068500	0	
	Seafood	1727	2/7/2014	Restore and Improve Long Beach Small Craft Harbor	Long Beach proposes to make significant restoration and improvements to its small craft harbor that will enhance the functional, aesthetic, and environmental components of the City's most visible public attraction. As one of the most loved an utilized harbors on the Coast, the City and the Long Beach Port Commission's plans for stabilizing and improving the functionality of the Long Beach Harbor will provide not only an added asset to the City of Long Beach, but an economic catalyst for the entire Mississippi Coast. The RESTORE Act funding will offset the devastating impact of the 2010 Oil spill to intended multi-year capital infrastructure improvements to Long Beach Harbor. Because expected revenue from existing and anticipated new leases, boat slip rentals, and potential economic developments ceased immediately, the revenue necessary to make aging infrastructure replacements and stability enhancements has not been available. Long Beach was unable to generate the revenue necessary to replace or upgrade the end-of life cycle (40+ year old) bulkhead, breakwater and other major components necessary to maintain the integrity of the infrastructure within the harbor, resulting in much greater than expected damage after even minor tropical events. Long Beach does have a tremendous advantage in executing RESTORE Act funds. The Long Beach Port Commission and a team of consultants have completed a Harbor Master Plan funded by CIAP grant. These Master Planning efforts can be leveraged so that a majority of any dollars spent will be used for actual construction - the plans and initial engineering will have already been completed. The Harbor Master Plan addresses the improvements of the harbor's existing infrastructure, upland areas and connection to the downtown, and the cost-effective expansion to the south of the current harbor to provide additional protection and functionality. The harbor infrastructure improvements will harden the harbor to minimize future hurricane damages, improve water quality and environments for marine habitat, and provide for economic and tourism developments.	Harrison	Yes	No	Yes	No	No	Yes	85	Yes	No		57210000	0	
	Seafood	1728	2/7/2014	Jim Simpson, SR. Memorial Fishing Pier	Create an artificial reef near Jim Simpson Pier to enhance recreational fishing.	Harrison	Yes	No	Yes	No	Yes	No		No	No		0	0	
	Seafood	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 City'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	No	No	Yes	10	Yes	Yes		3800000	250000	
	Seafood	1765	3/5/2014	East Jackson County Flood Control and Marine Habitat Enhancement	This project would add capacitance to the Escatawpa River watershed and remove encumbrances to sheet flow across the Grand Bay Savannah. This would be accomplished by construction of a flood control reservoir and/or alternately provide a means of flood water release by removing restrictions to flow created by I-10, Highway 90 and the railroad tracks south of Highway 90. Proposed project benefits: 1. Alleviate flooding in the Helena and Franklin Creek communities. 2. Establish sheet-flow across the Grand Bay Savannah to reduce bacteria levels in the eastern Mississippi sound allowing for reopening of the area's oyster beds. 3. Provide an alternate source of industrial water to Jackson County industries. 4. Provide recreational opportunities for area water enthusiasts and sportsmen.	Jackson	Yes	Yes	Yes	No	Yes	Yes	20	Yes	No		25000000	0	
	Seafood	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 Qualitys (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	No	Yes	No	Yes	No		No	Yes		9600000	0	
	Seafood	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	No	No	Yes	Yes	No		No	No		0	0	

	Seafood	1770	3/20/2014	Bayou Cassotte-Pt Aux Chenes Bay Watershed Management	This project will provide for hydrologic modeling, hydraulic improvements, coastal habitat restoration/enhancements, and flood reduction within the Bayou Cassotte-Pt. Chenes Bay Watershed. Detailed monitoring and modeling of the watersheds will be completed in an effort to reduce the downstream impacts of the watershed on Point Aux Chenes bay through stream restoration plans and habitat reconstruction designs. The watershed faces loss of wetlands, shoreline erosion, and sedimentation from increased land development. Stabilization of these bayous and stream segments will significantly reduce the future sediment loading into Point Aux Chenes Bay and Bayou Cassotte. Improvements to the highly impaired watershed are critical to ecological function of the region. The goal of this project is to develop a comprehensive watershed management plan as well as prioritize a list of significant restoration work.	Jackson	Yes	No	No	No	Yes	No		No	No		0	0	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		0	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	1773	3/20/2014	Graveline Bayou Oyster Bed Restoration	This project will focus on restoring Graveline Bayou's oyster reefs though the planting of new cultch material, dissemination of seed oysters, and cultivation of existing reef beds. The goal of this project is to increase Jackson County's oyster reefs, enhance the ecological diversity of the watershed, provide support to the local seafood industry, and also maintain and monitor the oyster habitat going forward. Oysters are not only a vital part of the seafood industry, but they also stabilize shoreline by breaking up wave energy, provide habitat for other marine organisms, and help filter the water. Oyster reefs in coastal Mississippi have been severely degraded due tot the impact from erosion and sedimentation, drought, predation, and harvesting. These impacts were heightened by direct exposure to the BP Deepwater Horizon Oil Spill. By enhancing the quantity and quality of cultch material currently available and planting new material, the reef locations can be prioritized, oyster density quantified, and overall reef health and informed harvest strategies developed.	Jackson	Yes	Yes	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	1774	3/20/2014	Graveline Bayou, Robert Hiram/Oakleaf Circle, Point Clear Restoration	This project will consist of removing sediment, water quality monitoring, and drainage improvements to the identified altered waterways. sediment removal allows for previously impeded green corridors to be restored. Previously, these water systems were only accessible at high tide. The goal of this project will be to retain some level of environmental and historic value of these highly altered systems. The efficiency of use will increase boating travel, both commercial and recreational, along the bayous and improve the adjacent communities' quality of life. Sediment removal and water quality monitoring amends the previous loss of recreational opportunity and increases the access to natural resources. Restored water systems have a greater capacity to manage stormwater runoff, erosion, and sedimentation which can negatively impact coastal marshes, beaches, and oyster reefs. By restoring these water systems to their baseline, a quality habitat for birds and wildlife negatively affected by the Deepwater Horizon Oil Spill can be provided.	Jackson	Yes	Yes	Yes	No	Yes	Yes		No	No		0	0	
	Seafood	1776	3/20/2014	Channel Marker Replacement and Jetty Construction	This project will consist of the construction of a new jetty at the convergence of Graveline Bayou with the Pascagoula Bay that will provide protection to the channel and reduce the effects of silting. In an effort to increase recreational boat traffic, channel markers within the bayou will be updated and replaced. This designation allows for management of preservation areas like the oyster reefs and expedites travel in and around Graveline Bayou. Jetty construction will stabilize the mouth of Graveline Bayou and limit the risk of shifting, as well as focus both tidal and bayou discharges through a single opening, thus combating the effects of littoral drift. With a deep and clear channel, boating traffic for both commercial and recreational can increase. The goal of this project is to increase the recreational opportunities of the adjacent community, allow for greater access to natural resources, and stabilize the convergence of Graveline Bayou with Pascagoula Bay.	Jackson	Yes	No	Yes	No	Yes	Yes		Yes	No		0	0	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		0	0	
	Seafood	1780	3/20/2014	Gulf Park Estates Bellefontaine Beach Restoration	This project will consist of a Wetland Coastal Preserves Program and Beach Restoration. The Wetland Coastal Preserves Program will target invasive species in and around the Gulf Park Estates and Marsh Restoration, ensuring that native flora and fauna thrive in the restored waterfront. The Bellefontaine Beach Restoration will rebuild and manage the Bellefontaine beachfront. It will serve to remedy or reduce the risks of future harm to the natural dunes and beach resources. The Preserve plan serves to enhance the ecological value of this important coastal habitat and manage the transition zone between the marsh, wetland, and beach areas within Gulf Park Estates. It will also strategically restore wetland and revitalize ecologically and economically important wildlife resources within Gulf Park Estates. the beach restoration will serve to preserve and protect the Bellefontaine shoreline, minimize economic losses caused by beach erosion, and maintain needed recreational and habitat beach areas.	Jackson	Yes	No	Yes	No	Yes	Yes		No	No		0	0	
	Seafood	1792	3/24/2014	Trent Lott International Airport Stormwater Management	This project will refurbish and update the airport facilities current stormwater system capacity, restore the environmentally effected infrastructure, and expand current facility to increase the emergency response capacity of the County to man-made and natural disasters. The Trent Lott International Airport plays a vital role in not only aviation community by also in the economic growth of the community. By restoring the streams in the flood prone areas surrounding Trent Lott, the airport can be rebuilt and expanded to combat the environmental driven erosion and degradation of the existing facilities caused by lack of watershed management. The airport not only serves corporate businesses, military and local pilots, but also provides logistical support during emergency situations on the Gulf Coast. Local law enforcement and fire fighting agencies relocate to the airport during tropical storms and hurricanes to ensure the ability to respond to duress calls and assist evacuees. The airport is also a safe entrance into the community to deliver supplies, medicine and relief manpower when disaster strikes. Most recently, the airport terminal supported ERA Helicopters LLC during the BP Oil Spill serving as the base for flight operations. The goal of this project will be to increase the stormwater systems capacity, enhance emergency response to manmade and natural disasters as well as expand the existing facilities to address economic development needs. The expansion proposals include a temporary terminal building, runway strengthening, and taxiway geometric improvements.	Jackson	Yes	Yes	Yes	No	No	Yes		Yes	No		0	0	
	Seafood	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kemp's Ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kemp'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 Kemp's ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kemp'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 Kemp's ridleys. The purpose of this project is to facilitate the recovery of Kemp's ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kemp's ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kemp's ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kemp's ridleys and their prey, will promote the restoration and recovery of Kemp'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 Kemp's ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kemp'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	No	No	Yes	Yes	Yes	60	No	Yes		18000000	0	
	Seafood	1811	4/17/2014	Pascagoula Beach Blvd. Bulkhead Improvements and Public Access	Pascagoula Beach Blvd. Bulkhead improvement project. The project in design would improve the walls to be able to withstand the additional load of the new seawall protection project and prevent the erosion of the beach sand by water overtopping the wall during normal tide and weather conditions. A waler and tie back rods with a dead man anchorage system is being designed to be added to the wall. This will also allow fishermen to use the wall as a point to fish and public access. These two areas are the outfalls for two major watersheds.	Jackson	Yes	No	Yes	No	No	Yes	100	No	No		424940	0	
	Seafood	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	No	No	No	No	Yes		Yes	Yes		5000000	0	
	Seafood	1813	4/25/2014	Buccaneer State Park Two-Tiered Restoration	Buccaneer State Park is in the Campbell Bayou-Bayou Caddy watershed (HUC 031700091401) west of the City of Waveland in Hancock County, MS and abuts multiple diverse coastal ecosystems and habitats, i.e. inland marshes, bayous, estuaries and shoreline/beaches. The Park also provides affordable public access, recreation and tourism opportunities on the Mississippi Sound shoreline to swim, crab and fish. The shorelines, estuaries and marshes adjacent to the Park were physically injured by oil from the Deepwater Horizon (DWH) Oil Spill. A two-tiered Project is proposed to restore and protect these coastal habitats by siting, designing, permitting and constructing approximately: 1) 1.9 miles of near-shore living shoreline, i.e. a low-crested submerged breakwater; and 2) 0.75 mile long by 100 yard deep high-profile, off-shore artificial reef. These features will complement and supplement three other proposed estuarine and upland restoration projects that encompass the majority of the Campbell Bayou-Bayou Caddy watershed: 1) Mississippi Department of Environmental Quality (MDEQ) Restoration of Buccaneer State Park Natural Resources Damage Assessment (NRDA) proposal, 2) Grand Bayou Ecological Restoration (Project-1767) and 3) Jackson Marsh, Grand Bayou and the Adjacent Gulf: Headwater Hydrologic Restoration (Project 1872). This Project is the marine component of a holistic watershed approach to restore a habitat corridor for coastal marine mammals, birds and fish between coastal, estuarine and upland ecosystems and provides multi-barrier protection to prevent residual oil from the DWH Oil Spill from reaching these restored habitats. MDEQ prioritized $2.6 million of NRDA Phase I early restoration fund to enhance Mississippis 67 existing near-shore artificial reefs each of which is approximately three acres in size. These traditional near-shore reefs provide hard bottom foraging and shelter habitats for smaller encrusting organisms, e.g., juvenile shrimp, crab and oysters that live on the reef and in the sediment. Most recently, MDEQ selected the Hancock County Marsh Living Shoreline Project for NRDA Phase III early restoration funding. This $50,000,000 Project combines constructing a 5.9 living shoreline to protect and enhance the shoreline and building 46 acres of subtidal oyster reef and 46 acres of marsh to increase near-shore secondary productivity. This Project proposes creating two mutually supporting habitats that will be sited to extend Mississippis artificial reef system west of Jailhouse Reef. The combination of an off-shore, high-profile (roughly 30 feet above high tide) artificial reef and a low-crested, submerged living shoreline will create a unique coastal habitat in Mississippi. This two-tiered approach will restore damaged marine habitats and natural resources and protect coastal, estuarine and upland habitats from residual impacts from the DWH Oil Spill. The living shoreline will restore injured near-shore habitats and enhance secondary natural resource productivity while the larger, high-profile reef will attract and concentrate larger recreational and commercial fish and restore and enhance damaged habitats for marine mammals and marine and coastal birds. Florida recently permitted a similar high-profile artificial reef system two miles off Henderson Beach State Park. The living shoreline will also be designed and sited to provide a final barrier to slow and treat run off, including stormwater runoff, from the entire Campbell Bayou-Bayou Caddy watershed before it enters the Mississippi Sound. MDEQ has a coastal water quality monitoring station immediately off shore of Buccaneer Park. This station can provide historical near-shore water quality data as the foundation of an expanded long-term monitoring effort to quantify and track the Projects secondary water quality benefits.	Hancock	Yes	No	Yes	No	Yes	No		No	No		8900000	0	

	Seafood	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	No	Yes	Yes		Yes	Yes		8000000	0	
	Seafood	1822	5/13/2014	Design and construction of a replacement for the R/V Tommy Munro	This document addresses the need for a mid-sized (110-120 ft) research vessel to replace the aging R/V Tommy Munro. The 98â€² R/V Tommy Munro was built in 1981 and has served USM and other Gulf academic, state, and federal users faithfully since then. However, the vessel no longer meets the needs of the expanded marine program at USM. We expect present users including ongoing survey programs such as SEAMAP to be retained on a new vessel. However, we note the dearth of vessels in this size category in the Gulf of Mexico. Other vessels of this size (e.g., the 116â€² R/V Pelican built in 1985, the 115â€² R/V Weatherbird built in 1982) are of the same vintage and offer similar constraints for use in modern at-sea research programs. Thus, we anticipate that a new vessel would attract considerably increased usage if properly designed. Included in this wider range of research are programs requiring quiet technology, such as acoustics, dynamic positioning for ROV deployment and precise benthic sampling, modern speed and winch control for trawl gear testing, modern electronic capabilities including acoustic transmission for net sensors and conducting cable for overboard sampling gear, etc. The vessel would position USM as a leading vessel operator in the Gulf of Mexico and provide considerably expanded capability in support of many RESTORE programs. A replacement vessel should have the following characteristics: a. Length: 110-120 ft b. Draft: â‰¤10 ft c. Quiet technology (e.g., electric drive, etc.) to support acoustic research d. Trawl winches and hydrographic winches below deck/above deck to provide maximum free deck space aft e. Dynamic positioning f. Moon pool g. Auto-trawl system h. Capable of mounting a full range of net sensors i. Dry and wet laboratories j. Berthing for minimally 10 scientists plus crew k. State-of-the-art internal (e.g., laboratory to wheelhouse) and external (e.g., vessel-wide satellite connectivity) communications l. Rigged stern for trawl deployment. Rigged port and starboard for overboard deployment of research gear (e.g. CTD/rosette, box core, plankton nets) m. Conducting cable on hydrographic winch n. Maximum fuel efficiency o. Competitive day rate p. Shore-based infrastructure to support expanded gear storage and mobilization demand 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.	Jackson	Yes	No	No	No	Yes	Yes	100	No	No		20	0	
	Seafood	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€ƒ	Jackson	Yes	No	No	No	Yes	Yes	100	Yes	Yes		6	0	
	Seafood	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. â€ƒ	Jackson	Yes	No	No	No	No	No		No	Yes		2923716	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		7500000	0	

	Seafood	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 NGO'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	No	No	No	Yes	No		No	Yes		2000000	0	
	Seafood	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€¢rapid assessmentsâ€• 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	No	No	No	Yes	No		No	Yes		3739000	0	
	Seafood	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	No	No	No	Yes	Yes	30	No	Yes	monitoring	2055750	0	
	Seafood	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. Since 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	No	No	No	Yes	No		No	Yes		8000000	0	
	Seafood	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 Director'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	No	No	No	Yes	Yes	100	Yes	Yes		1.92	0	

	Seafood	1840	5/14/2014	Redesign of GCRL Halstead Campus entrance, vehicular routes, and boat access	GCRL'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 GCRL'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	No	No	No	Yes	Yes	100	Yes	Yes		735000	0	
	Seafood	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 Mississippi'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€ƒ	Jackson	Yes	No	No	No	Yes	Yes	10	Yes	Yes		5.5	0	
	Seafood	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	No	Yes	No	Yes	50	Yes	Yes		2	0	
	Seafood	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 state'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	No	No	No	Yes	Yes	40	Yes	Yes		30000000	0	
	Seafood	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	No	No	No	Yes	No		Yes	Yes		50000000	0	

	Seafood	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	No	No	No	Yes	Yes	15	Yes	Yes		30000000	0	
	Seafood	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	No	No		Yes	Yes		10000000	0	
	Seafood	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 states' resources agencies and expand the capacity of Mississippi'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. â€ƒ	Jackson	Yes	No	No	No	Yes	No		No	Yes		3641598	0	
	Seafood	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	No	No	No	No	No		No	Yes		1200000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1680000	0	

	Seafood	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	No	No	No	Yes	Yes	50	No	Yes		7250000	0	
	Seafood	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 State's natural resources and thereby promote enhanced seafood harvest and production, expanded recreational fishing activities, and associated tourism.	Jackson	Yes	No	No	No	Yes	No		No	Yes		2150000	0	
	Seafood	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	No	No		Yes	Yes		400000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1500000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		3000000	0	

	Seafood	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	No	No	No	Yes	No		No	Yes		12000000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		150000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1150000	0	
	Seafood	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 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	No	No	No	Yes	No		No	Yes		1125000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		740500	0	
	Seafood	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	No	Yes	Yes	Yes	No		Yes	Yes		1688000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	80	Yes	Yes		5720500	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	40	Yes	Yes		1370500	0	

	Seafood	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	No	Yes	Yes	Yes	Yes	80	Yes	Yes		9519500	0	
	Seafood	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 Coalition'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 State'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		739478	0	
	Seafood	2025	11/9/2011	Mississippi Early Resource Restoration Using Artificial Reefs	This project intends to restore and enhance existing reefs within the Mississippi Sound using crushed concrete or limestone. These reefs would be low profile. Restoration would consist of adding acreage to the existing artificial reef footprint. MDMR's Artificial Reef Bureau would be working with the nonprofit group Mississippi Gulf Fishing Banks (MGFB). MGFB is made up of fishermen throughout Mississippi whose interests are in creating valuable marine habitat in Mississippi's nearshore and offshore waters.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No	Yes	6700000	0	
	Seafood	2026	11/9/2011	Early Restoration of Oyster Cultch Area in Mississippi Sound	The goal of this project is to restore approximately oyster cultch areas in the marine waters of the State of Mississippi. The state of Mississippi has approximately 12,000 acres of total cultch areas. About 9,000 acres of the oyster cultch areas can be harvested while about 3,000 acres of cultch areas are closed to harvest. This project would restore and enhance the major and minor oyster cultch areas within the marine waters of Mississippi Sound of Mississippi. This project will utilize cultch planting to improve the oyster cultch areas. Specific activities consist of the following: (1) Deploying Cultch Material: Cultch would be deployed within existing oyster cultch areas. Locations for potential cultch deployment are known based on recent surveys. (2) Monitoring: MDMR staff would regularly monitor the newly established oyster cultch areas by live collections to assess the overall health of the oyster cultch. The cost for this project is $10,000,000 to $12,000,000.	Hancock, Harrison	Yes	No	No	No	Yes	No		No	No	Yes	12000000	0	
	Seafood	2029	11/9/2011	Restoration of Crab Fishing	Part 1 - Derelict Removal Program: Expanded cooperative effort with crab fishermen to remove derelict crab traps (resulting from oil spill and associated fisheries closures and storms) during closed seasons for directed trap cleanup. An annual closed season for crab traps occurs during which time derelict traps may be removed and recycled. Due to storms and man-made events, inadvertent cropping of float lines by propellers, and theft, an estimated 20% of active crab traps can become lost in the waters of the Mississippi Sound, creating navigational hazards and affecting marine resources such as the country?s only estuarine turtle, the Diamondback terrapin. Resident licensed crab fishermen can continue to be enlisted to assist in the cleanup of derelict traps. Time to Complete: 6 months Part 2 - Crab Trap TED (Turtle Excluder Device) Program: Essential terrapin habitat in Mississippi marshes is expected to be damaged as a result of the oil spill. Terrapins can become inadvertently caught in crab traps. A grass-roots cooperative effort between crab fishery participants and the MDMR could be expanded. The MDMR is assisting in the installation of turtle excluder devices (TEDs) in crab traps of volunteer commercial and recreational crab license holders at no cost to fishermen to help deter incidental catch. Crab fishery participants would also be enlisted in the monitoring of terrapin populations through cooperative research projects. Time to Complete: several years Costs depend on extent of program and degree to which volunteers are used for the trap removal.	Jackson	Yes	No	No	No	Yes	No		No	No	Yes	500000	0	
	Seafood	2039	8/1/2011	Environmentally Sustainable Working Waterfronts	This project consists of financial assistance to local seafood industry entities, affected by the Deepwater Horizon event, who participate in the development of environmentally sustainable working waterfronts projects through a variety of methods such as the following: Environmental planning, design, engineering, and impact statements; legal activities; public facilities upgrades or repairs such as water and sewer services, access roadways, parking and boat ramp facilities; dredging and/or cleaning of harbors and expanded commercial waterfront sites; repair and or construction of piers, jetties (breakwaters), and other improvements deemed necessary for both short term and long term success of environmentally sustainable working waterfront projects. The proposed project would provide a basic organization for recovering seafood industry operations, making funding opportunities available to qualified applicants for the establishment of support facilities to offload and sell Gulf products directly into a public market. The intent is to consolidate, where practical, harvesting, wholesale, and retail sales and processing in safe accessible locations, to achieve a more efficient operation that will benefit all stakeholders including the harvesters, the consumers, the processors and ultimately Mississippi’s marine environment.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes		No	No	Yes	4000000	0	
	Seafood	2050	7/25/2011	Restoration of Buccaneer State Park	his project consists of habitat enhancements including submerged aquatic vegetation (SAV) plantings. Historically, SAV beds of Ruppia maritima have been documented intermittently along the adjacent coastline. SAV beds are an important nursery for many commercially important species, such as blue crabs. Since the marine environment of the State Park can be impacted by freshwater from the opening of the Bonnet Carre spillway, it would be important to utilize a multiple habitat restoration approach for this area. Also, adjacent waters have some existing oyster reefs and sand borrow areas used for local beach nourishment projects. Therefore, oyster reefs could be re-established at the park.Oyster reefs could enhance the stability of the seabed, promoting additional SAV development shoreward of the reefs. Sand renourishment and construction of low profile artificial reefs would add further to habitat and fisheries enhancements.	Hancock	Yes	No	No	No	Yes	No		No	No	Yes	7000000	0	
	Seafood	2061	7/25/2011	Rehabilitation of Marine Fish Stocks	This project consists of restocking of important species of marine organisms along the Gulf Coast of Mississippi. Major marine ecosystems have been impacted and interrupted by the Deepwater Horizon event. Potential species for restocking (e.g., mullet, crab, red drum, and others as appropriate) would be integral parts of the marine ecosystems.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No	Yes	10000000	0	
	Seafood	2070	9/7/2011	Blue Crab Trap Removal	Crab traps are a significant problem in the Gulf of Mexico, having negative impacts on habitat and species. Derelict gear such as blue crab traps can cause a number of problems since throughout the Gulf of Mexico, more than 250,000 traps are thought to be added to the derelict population each year (Guillory 2001). The most significant is that they continue to catch and kill a variety of species, in a process called ghost fishing. Traps can also damage habitat, interact with threatened and protected species, and introduce debris into the food web. They also hinder commercial operations such as shrimp fishing and can result in damage to boats and injuries to people. Derelict gear can persist for decades once it is lost. These traps can be physically removed during winter months due to the shallow water depths at that time of year. This is a ""shovel-ready"" project that would involve both state partners as well as local fishermen who would be contracted to conduct the removal. Based on estimated annual trap losses, including increased loss rates due to hurricanes and storms, it is estimated that this project could retrieve 500,000 derelict crab pots if fully funded. States have derelict trap programs that are habitually compromised by inconsistent budgets and participation rates. There are no NEPA concerns, with the only legal requirement being coordination with State agencies for short-term closures to facilitate removal activities. Removal will positively impact species by minimizing bycatch, including more than 20 species of fish and 6 species of invertebrates. The number of derelict traps in the Gulf of Mexico is currently unknown. There are, however, some annual estimates of trap disposal and overall trap loss; the latter also includes trap loss due to theft. Estimates of annual trap loss on a percentage basis for each Gulf state range widely: 30%-50% in Florida; 20%-50% in Alabama; 20%-30% in Mississippi; and up to 100% in Louisiana (Guillory 2001). Rolling fishe ry closures, coordinated closely with the most appropriate agency in each state, will allow for the physical collection of derelict or lost blue crab traps. States independently manage their own existing trap removal efforts, and this restoration project will have strong education and outreach. Traps will be removed from the coastal environment, and recycled to avoid waste contribution to landfills. Local fishermen and personnel will be consulted to determine the regions most in need of cleanup.	Gulf of Mexico	Yes	No	No	No	Yes	No		No	No	Yes	10000000	0	
	Seafood	2074	7/14/2014	Oyster Reef Structural Complexity	Summary attached.	Hancock, Harrison	Yes	Yes	Yes	No	Yes	No		Yes	Yes		438035	0	

	Seafood	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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and	Hancock, Harrison, Jackson, St. Tammany, Mobile	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		47000000	0	
	Seafood	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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and	Mobile, Hancock, St. Tammany, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		49000000	0	
	Seafood	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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and	Harrison, Jackson, Hancock, Mobile, St. Tammany	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		19000000	0	
	Seafood	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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		7000000	0	

	Seafood	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€lin 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	No	Yes	Yes	Yes	Yes		Yes	Yes		1640000	0	
	Seafood	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 state'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	No	Yes	Yes	Yes	Yes	20	Yes	Yes		12000000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	20	Yes	Yes		20000000	0	
	Seafood	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	25	No	Yes		500000	0	
	Seafood	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 world'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	No	Yes	Yes	Yes	28	Yes	No		132000000	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		2337500	0	

	Seafood	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	No	Yes	No	Yes	Yes	15	Yes	Yes		1100000	0	
	Seafood	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 world'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 species' diets, is in short supply given that it is derived from the world's oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the world'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 GA'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 State's abundant natural resources,	Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		12000000	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		1800000	0	
	Seafood	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 EPA'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 Seafoodsâ€. 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 important insight into 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 the ratios of Hg naturally found in the sample. The spiked sediment is incubated and allowed to undergo methylation naturally, with the isotope essentially serving as a tracer. The amount of tracer		Yes	No	No	No	Yes	No		No	Yes		120000	0	
	Seafood	2166	11/7/2014	â€œOyster Watchâ€ A New Approach to Monitor the Health of Critical Habitats and Food Resources along the Coastal Gulf of Mexico	Oysters are a crucial constituent of the northern Gulf of Mexico, and the Mississippi Sound, communities that represent an important commercial fishery species, as well as biological sinks of anthropogenic contaminants due to their significant filter feeding. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM coastal habitats have resulted in significant damage and loss of these critical ecosystems. Thus, monitoring water quality in these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Using our expertise in UM's Environmental Toxicology Research Program, we propose to develop an environmental monitoring program along the MS coastline based on the successful â€œmussel watchâ€ program of the east and west coasts of the USA, in which PI Slattery was involved. However, our approach will focus on the commercially and ecologically important oysters of the GoM coastline. Specifically, at sites of interest we will â€œcageâ€ hatchery oysters throughout a habitat of interest and recover replicate individuals (n=10) over time (i.e., monthly) to examine tissues for specific contaminants: 1) fecal coliforms levels, 2) PAH concentrations, 3) heavy metals, and 4) the presence of other important anthropogenic contaminats (e.g., endocrine disruptors). In addition, we will monitor the health of the oysters through changes in biomass and biochemical parameters indicative of stress (i.e., proteins, carbohydrate, and lipid), as well as, changes in specific stress proteins from the oyster proteome. The data will be analyzed using appropriate time series statistics, as well as proteomic 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 coastal habitats, it is possible that regional resource managers may wish to focus on specific sites and the data from this 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. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	No	No	No	No	No		No	No		284312	0	

	Seafood	2167	11/7/2014	Biological Filtration: Using Sponges to Remediate Gulf of Mexico Coastal Contaminants	Coastal marine ecosystems are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that include important commercial fishery species, as well as threatened and unique species. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) within these GoM ecosystems have resulted in significant damage and loss of these critical resources. Thus, the restoration of water quality along the Mississippi coastline is crucial for residents and stakeholders. We propose to deploy a system of biological filters around the periphery of important GoM habitats (e.g., seagrass beds) to clear contaminants from the water column and improve water quality. Specifically, we will attach marine sponges to multiple deployed cinder blocks, and divers will position these â€œupstreamâ€ of identified habitats and/or between point source discharges and the habitat in question. Marine sponges are important filter-feeders with pumping rates in excess of 3L per h, and many contain extensive symbiotic microbial populations that have important roles in biogeochemical cycling (e.g., nitrification processes). Research by Pls Slattery and Gochfeld has demonstrated significant clarification of particulate organic carbon (POC) and microbial metabolism of dangerous nitrogen species into biologically-useful nitrogen. Moreover, we can seed sponges with specific microbes that are known to clear PAHs and other toxic metabolites. We will position sufficient biological filters (i.e., cinder-blocks w/ sponges) to clear the water near habitats of interest, and through resources in UM's Environmental Toxicology Research Program [ETRP], we will monitor changes in the water quality post-deployment. 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. The budget provided represents the aforementioned remediation 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	No	Yes	No	Yes	Yes	30	No	No		311763	0	
	Seafood	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	No	Yes	Yes	Yes	No		No	Yes		391457	0	
	Seafood	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	No	No	Yes	Yes	Yes	100	No	Yes		400000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		294392	0	
	Seafood	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 UM'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	No	Yes	No	Yes	No		No	Yes		287192	0	
	Seafood	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 UM'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	No	Yes	No	Yes	No		No	Yes		287192	0	

	Seafood	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 Mississippi'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 can	Hancock, Harrison, Jackson	Yes	Yes	Yes	No	Yes	No		Yes	Yes		125000	0	
	Seafood	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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	
	Seafood	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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	
	Seafood	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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	

	Seafood	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€ 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 residents' quality of lifeâ€ which is listed under Additional Requirements in the	Harrison	Yes	Yes	Yes	Yes	No	No		Yes	Yes		9500000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	20	No	Yes		650000	0	Equipment development and purchase
	Seafood	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	No	No	Yes	Yes	Yes	100	Yes	Yes		5000000	0	Equipment development and purchase
	Seafood	2197	11/13/2014	The impact of Louisiana restoration projects on the Mississippi Sound, and Estuary	Coastal Louisiana has experienced substantial wetland loss since the construction of Mississippi River levees in the late 1800s. This land loss is largely a result of marsh edge erosion and submergence of interior wetlands, combined with smaller contributions from direct land removal for canals, construction purposes, etc. One cause is the elimination of spring over-bank flooding which delivers sediment to the marshes. Other factors include: 1) a reduced sediment load in the Mississippi River; 2) landscape and hydrology alternations from man-made canals; 3) a high rate of regional subsidence due to sediment compaction, tectonic subsidence, subsurface withdrawal associated with oil/gas/groundwater extraction, and eustatic sea level rise; 4) wave and tidal erosion, which accelerate in importance as water bodies become larger; and 5) tropical cyclone events. In response, Louisiana has developed a 50-year Master Plan which includes a mix of sediment diversions to build new deltas, removing existing barriers on Mississippi River tributaries such as the Bayou Lamoque floodgate, sediment piping and dredging to recreate marshland, and levees/floodgates to protect urban areas from storm surge. This Master Plan will be funded through a variety of sources, including different Restore Act avenues. However, the impact on Mississippi has generally not been considered. We propose a monitoring and surge modeling program to assess these impacts. Freshwater flow from diversions could affect Mississippi's seafood industry and also alter the Mississippi Sound ecosystem. The high-nutrient content of Mississippi River water is known to create hypoxic zones in the Gulf of Mexico. In addition, these nutrients may also be impacting wetland root systems in organic soils, making them vulnerable to storm surge as suggested by the high-erosion rate near the Caernarvon diversion. Deliverables include: 1) salinity and water quality monitoring with weekly boating surveys; 2) ocean modeling sensitivity studies of diversion outflows and floodgate removals; 3) sensitivity modeling studies of storm surge from floodgates in the Rigolets and Chef Pass on Mississippi, which is part of the Master Plan.	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	Yes		No	No		500000	500000	
	Seafood	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	No		Yes	Yes		2500000	0	

	Seafood	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. Monitoring of	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	No		Yes	Yes		1360324	0	
	Seafood	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 1970'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 crustaens (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 mitration. 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 conditions during the ship island	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	No		Yes	Yes		1480192	0	
	Seafood	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	No	Yes	Yes	Yes	Yes		Yes	Yes		410000	360000	
	Seafood	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 Mississippi'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 Agriculture'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 Council'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 program's geographic location and size encompassing the St. Louis Bay and tributaries was selected to meet the Council's four priority criteria. Specifically, this holistic approach is easily scalable to address all the Council's goals and objectives and transferable to be replicated throughout the Gulf region and; f¦ÀWill significantly and measurably contribute to restoring and protecting the Gulf Coast Region's natural resources, ecosystems, fisheries, marine and wildlife by concentrating and coordinating individual projects; f¦ÀIs large enough to substantially contribute to restoring and protecting the Gulf Coast ecosystem's natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands yet small enough quantity specific improvements; f¦ÀCovers the St. Louis Bay and tributaries which Mississippi'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 f¦ÀProvides 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 education expertise. The process is patterned after tested and proven watershed management approached and would start with extensive outreach and local engagement to create and organize a St.	Hancock,Stone,Pearl River,Forrest,Harrison	Yes	No	Yes	No	Yes	Yes	20	Yes	Yes		14968000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		3500000	0	

	Seafood	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 Gulf'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,Pearl River,Forrest,Perry,George,Stone,St Tammany,Mobile,Washington	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes		467187	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		900000	0	
	Seafood	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 Mississippi'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 Mississippi'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	No	Yes	No	Yes	No		Yes	Yes		900000	0	
	Seafood	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 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 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 enterococii so that enterococii 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	No	Yes	No	Yes	No		Yes	Yes		900000	0	

	Seafood	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 Council'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 Council'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		0	0	
	Seafood	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 HUD'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 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	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	Yes		Yes	Yes		90000	0	
	Seafood	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 Cruisin' 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 GoCoast's 8 key areas of focus: eco-restoration, economic development, seafood, infrastructure, tourism, workforce development, small business, research and education. The CoBGC and the CCA will	Harrison	Yes	Yes	Yes	Yes	No	Yes	86	Yes	Yes		35000000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	10	Yes	Yes		4515000	0	

	Seafood	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, biocchar 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. Sorbent's absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbent'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, SEE's low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biochars' 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. 4.SEE group will then test the oil-absorption capacity of the raw and activated biochar and compare those of the synthetic carbon in the market. 5.SEE will conduct techno-economic analysis of the proposed biochar-absorption process and compare it with that of the current technologies.		Yes	No	Yes	Yes	Yes	No		Yes	Yes		300000	0	develope product and create industry in MS
	Seafood	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	78	Yes	Yes		25775000	0	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		570000	20000	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		350000	20000	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		320000	20000	
	Seafood	4285	1/5/2015	Tourist Corridor and Gateway Beautification - Enhance Aquatic Habitat	Supporting facts 1.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.Research 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. 3.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. 4.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. 5.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 Enhance aquatic habitat around existing piers to promote fishing, crabbing and other recreational activities for tourists - $1,750,000	Harrison,Hancock ,Jackson	Yes	No	Yes	No	Yes	No		Yes	No		1750000	0	

	Seafood	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 NASA'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 Coast'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 region.	Hancock,Harrison , Jackson	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes	Yes		2019250	0	
	Seafood	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; Workforce development & education;	Jackson, Hancock, Harrison Counties	Yes	Yes	Yes	Yes	No	No		Yes	Yes		8.4	0	
	Seafood	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	Yes	Yes	No	No		Yes	Yes		15	0	
	Seafood	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. 7. Recording interview with media recording devices if participants allow permission.		Yes	No	No	No	No	No		No	Yes		90700	0	Community interviews
	Seafood	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 funder'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	No	Yes	No	Yes	No		Yes	Yes		2000000	0	monitoring and Data Synthesis

	Seafood	4306	1/26/2015	Escatawpa River Hydrologic Restoration Study	The health and productivity of the Northern Gulf of Mexico's estuarine and coastal ecosystems and habitats is tied to salinity levels and their inland extent. Salinity levels are inexorably linked to the timing, duration, volume and location of freshwater inflows from innumerable rivers, streams and bayous. Mississippi's main coastal rivers such as the Pascagoula and Escatawpa collect and transport large volumes of rainfall, sediment and nutrients from a fairly flat landscape into bays or estuaries and on into the Mississippi Sound where fresh, estuarine and Gulf waters intermingle. As they near the coastal interface, rivers often meander through flat, marshy landscapes with numerous secondary and abandoned channels, oxbows and large areas of off-channel wetlands. The coastal savannahs and estuarine marshes of Mississippis Grand Bay represent the historic deltaic environments the Pascagoula and Escatawpa Rivers formed when the Escatawpa River flowed directly into the Mississippi Sound near the border of Mississippi and Alabama in east Jackson County, Mississippi. At some point before 1950, the Escatawpa River channel shifted so that it flowed directly into the Pascagoula River and not Grand Bay. The Pascagoula River outlet also shifted westward which severely limited the inflow of freshwater, nutrients, and sediments into Grand Bay. The construction of bridges for railroads and highways also altered historic sheet flow and surface water flows and contributed to the loss of historic freshwater flows into Grand Bay. Many of the bayous flowing into Grand Bay have also been modified by development and conversion for commercial, residential, industrial, or recreational purposes. Much of the Grand Bay's unique ecosystem is protected and managed as public lands including a National Estuarine Research Reserve (NERR) (18,000 acres) and a National Wildlife Refuge (NWR) (32,000 acres when complete). The Mississippi Department of Marine Resources also has two Gulf Environmental Management Sites (GEMS) in the Grand Bay watershed 1) the 2,826-acre Escatawpa River Marsh Preserve and 2) the 26,900-acre Grand Bay Savanna Preserve. Most plants and animals found in these estuarine ecosystems can only tolerate a specific salinity range. Generally, animals can quickly move or migrate to find water with the appropriate salinity. However, plants cannot adapt as quickly and will die and be replaced with more resilient plants if there are long-term salinity changes. Precipitation, or the lack of precipitation, and its delivery into the estuaries is the primary factor influencing salinity levels. Similarly, habitats change in response to salinity levels. Moving upstream or inland from the coast the tidal influence wanes allowing tidal freshwater marshes and swamps to form. Water levels in these transitional habitats vary from tidal fluctuation and from freshwater inflow. The habitats may be dry for prolonged periods of time during droughts and totally submerged for weeks at a time during floods. Accordingly, alterations in the location and volume of freshwater inflow can severely disrupt Grand Bay's unique coastal ecosystems and habitats. In addition, Global Climate Change/Variation projections predict even less freshwater inflow because of less precipitation and higher temperatures with increased evapotranspiration throughout Grand Bay's watershed. A diversion project to return a portion of the Escatawpa River's flow to Grand Bay may be critical to ensure Grand Bay's ability to provide long-term ecosystem services. Still, any freshwater diversion may deliver excess sediment and nutrients into Grand Bay which could cause algal blooms, lower light attenuation, and eutrophication. The Mississippi Coastal Improvements Program (2009) proposed developing a â€œa refined hydrodynamic model for the area, inputting biological, water quality, and physical data into the model to evaluate a variety of freshwater diversion scenarios.â€ The modeling effort needs to be conducted in conjunction with interviews and public workshops to gather community information. If feasible, a freshwater diversion project may serve to enhance the areas wildlife resources. The need for freshwater diversion at the Grand Bay savannahs and marshes would help restore the predominant wet pine savannah habitat.	Jackson	Yes	No	Yes	No	Yes	No		No	No		3500000	0	
	Seafood	4316	2/19/2015	Bay St Louis stream restoration, canal dredging project and Removal of Derelict Boat Houses and Piers Project	Bay St Louis has over 27 miles of waterways inside the city limits. The waterways include natural streams and a system of canals that connect to the Jordan River and Bayou Lacroix. The entire system is in great need of maintenance dredging and debris removal to cure the residual impacts of sediment and trash accumulated from decades of hurricane and flood deposits. Dredging the entire system would have multiple benefits that would include but not be limited to improving: water quality, flood prevention with better drainage/runoff, navigation, recreational safety and useful byproduct(sediment removed could serve as marsh replenishment material). BSL proposes to remove the numerous derelict boat houses and damaged piers/pilings from along the water front on Beach Blvd. These structures pose a navigational danger to boaters, fisherman and recreationalists which frequent the water front.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		15000000	0	
	Seafood	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 SBA'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. MSET'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	No	No	No		No	Yes		70000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	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	0	0	
	Seafood	4350	4/14/2015	Restoration of Deer Island with Beneficial Use of Dredged material	Please see Attached Proposal	Harrison	Yes	No	Yes	No	Yes	No		No	No		3000000	0	
	Seafood	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 1950'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	No	Yes	No	Yes	Yes	15	Yes	Yes		340380	0	

	Seafood	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 appropriate	Yes	No	Yes	No	Yes	No		Yes	Yes		20000000	20000000	
	Seafood	5379	7/13/2015	East Mississippi Artificial and Oyster Reef Expansion and Enhancement	Anglers and conservation organizations working with the TRCP to identify projects to help restore and sustain fisheries along Mississippi"s coast stated areas in eastern Mississippi are lacking in artificial reefs and the natural reefs in the area have been diminished by decades of oyster harvest. Areas in Pacagoula Bay and adjacent waters suitable for oyster production after placement of reefing materials would have to be identified. Placement of 30 acres in all of reefing materials including limestone, crushed concrete and recycled oyster shells would follow the identification of suitable reefing areas. Additional funding should be set aside for maintenance and monitoring of reefs over the next two decades.		Yes	No	Yes	No	Yes	No		Yes	No		6	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		1	0	
	Seafood	5381	7/13/2015	Offshore Artificial Reef Creation, Monitoring and Rehabilitation	Mississippi Recreational fishing groups have been successful in securing materials suitable for construction of productive reefs that can increase fisheries habitat as well as access for anglers. Funds have historically been unavailable for monitoring and maintenance of existing reefs and for deployment of new reef materials. The offshore artificial reef creation monitoring and rehabilitation program would provide the funds needed to monitor and enhance existing reefs as well as identify additional locations for reef construction in areas most suitable for reef habitat and where fisheries production can be maximized.		Yes	No	Yes	No	Yes	No		Yes	No		25	0	
	Seafood	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,Jackson,Stone,Hancock,Pearl River,Mobile,St Tammany	Yes	Yes	Yes	Yes	Yes	Yes	25	Yes	Yes		10	0	
	Seafood	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 direct access to East and West Channels. Project activities include expanding the harbor east to provide approximately 60 new slips and improve harbor accessibility; constructing new public amenities	Harrison	Yes	Yes	Yes	No	Yes	Yes	80	Yes	Yes		35000000	0	
	Seafood	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-O'Keefe Museum of Art, the Schooner Pier Complex, the proposed Tricentennial Park, Harrah'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. The regional economy will benefit through a more successful charter fishing industry that will result from consolidating the boats into a more visible, attractive, conveniently-accessed location. ADA-	Harrison	Yes	Yes	Yes	No	No	Yes	80	Yes	Yes		6000000	1000000	

	Seafood	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 90 Bridge 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	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	80	Yes	Yes		35000000	0	
	Seafood	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	No	Yes	90	Yes	Yes		20000000	1000000	
	Seafood	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	No	Yes	No	Yes	Yes	60	No	Yes		500000	25000	
	Seafood	5403	9/11/2015	National BBQ and Seafood Competition	According to Linda Orrison, President of the National Barbecue Association and owner of Tee Shed Barbecue Restaurant, Mississippi has the most award-winning barbecue cookers int he Country and it is time to get the word out! A national competition at several venues and on several scales would include professional competition, amateur competition, SEC tailgating competition and a Seafood competition. Chefs and cooks from the Coast would compete against chefs from all over the country. And with connections with the Food Network, through Diners, Drive-ins and Dives, Mississippi Gulf Coast would be featured as a culinary destination! Venues would include The Shed, Great Lawn at Harrah's, MGM Stadium and others as it grows. Partners include Visit Mississippi Gulf Coast, area casinos and the Gulf Coast Tourism Foundation.	Harrison,Jackson	Yes	No	Yes	No	No	No		Yes	No		350000	200000	
	Seafood	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; USDA'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	No	Yes	No	Yes	30	Yes	Yes		13000000	0	
	Seafood	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 Mississippi'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 Mississippi'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 time â€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 Mississippi'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 and Jackson	Yes	Yes	Yes	Yes	No	No		Yes	No		12000000	5000000	

	Seafood	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 entity'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 Mississippi'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 allow	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	85	Yes	Yes	agriculture	15000000	0	
	Seafood	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 Governor'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. Mississippi'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	Yes	No		Yes	No		1000000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	Land Acquisition
	Seafood	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		100000000	0	
	Seafood	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		18000000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		1500000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		300000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		150000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		2850000	0	
	Seafood	5479	7/15/2016	Ways to augment oyster restoration with special products	To jumpstart oyster production off the coast of Mississippi by introducing seeded eyed larvae. These eyed larvae would come from Mississippi brood stock and produced at a Mississippi hatchery. The oyster larvae would be seeded on substrate and then placed in the water. The project would benefit the state of Mississippi by jump starting the number of oysters in beds being created. The young oysters being put on the substrate would spawn naturally and release their larvae into the beds being created.	Harrison,Hancock ,Jackson	Yes	No	No	No	Yes	No		Yes	No		500	0	

	Seafood	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 Governor'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 State'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 State's commercial oyster fishery. To support these restoration objectives and achieve the State'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 Council's Hatchery Sub-Committee as the recommended hatchery to support Mississippi's oyster restoration because of its inland location out of harm's way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	Yes	Yes	Yes	77	Yes	Yes		13000000	0	
	Seafood	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	No	No	No	Yes	Yes	20	No	Yes		425000	0	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		250000	0	
	Seafood	5492	6/30/2016	Pass Christian Harbor Elevated Walkway	The proposed project is to construct an elevated pedestrian walkway over U.S. Highway 90 in Pass Christian, MS. The walkway would connect the downtown business district to the Pass Christian Harbor. This project would not only enhance economic development in the City but would also promote new development at the harbor. The walkway would allow for safe pedestrian access from the harbor to the downtown area, which would be used by local commercial and recreational fishermen as well as tourists and transient boaters. The City of Pass Christian recently invested in the construction of a Day Pier to allow transient boaters a convenient place to dock their boat while not having to rent slip space. The Elevated Walkway would attract more local attention to both the harbor and the adjacent businesses by having unobstructed safe access across a major vehicular thoroughfare.	Harrison	Yes	Yes	Yes	No	No	Yes		Yes	No		2400000	0	
	Seafood	5496	7/12/2016	Establish and Nationally Promote Mississippi Tourism Packages	The Wilem Group (TWG) is currently working with MDA to promote tourism within the State via its two television shows airing to over 30 million households in most major cities. Gulf South Outdoors highlights Mississippi outdoor activities ranging from fishing to hunting, to kayaking and even eco-tourism. The company's second show, Hook It & Cook It, focuses on safe seafood featuring seafood caught in state waters, cooked, and even eaten on the show. For example, after watching a show featuring one of the Mississippi Coast's fishing guides, viewers will be able to book a package including lodging and meals to fish with the very guide they just watched on the show. Funding from this project, will enable future shows to focus on a wider variety of activities such as fresh water/offshore fishing, hunting, kayaking, hiking, eco-tourism and could even highlight music, art, and dining throughout the state. In each case, the viewer will be afforded the opportunity to book a package to enjoy the same activity they just watched or the same meal that they watched being prepared providing a direct tourism benefit with metrics which can be measured. Agreements are already in place to handle the backside of processing reservations and accepting payment from tourists throughout the country. Activity-based video vignettes will be produced that are specific to tourism packages. Some will be incorporated into shows while all will be used in Internet promotions. The show casts Mississippi in a favorable light helping viewers across the nation to learn what we have to offer while combating negative stereotypes. Cost for this project is $138,000 for one year (with the option to continue funding for up to four additional years) and would be used to: â€¢ Create additional video vignettes focusing on specific tourism activities for use on the company's two television shows, as well as in the company's and state's Internet marketing, and â€¢ Promote tourism packages by driving additional viewers to watch the shows, learn about what the state has to offer, select from a variety of all-inclusive packages, and put â€œheads in bedsâ€ with metrics which can be tracked. Tourism package ads will be run on the actual show. Also, ads promoting the show itself as well as the packages will be posted in a variety of places including Facebook sponsored posts, YouTube pre-roll, and targeted Internet ads.		Yes	No	Yes	No	No	No		No	No		138000	60000	
	Seafood	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	No	Yes	Yes	Yes	Yes	50	Yes	No		500000	0	
	Seafood	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 Biloxi's seafood industry. This project complements the City of Biloxi'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 Biloxi'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	100	Yes	Yes		25000000	0	

	Seafood	5509	9/8/2016	Sanitary Sewer System Rehabilitation Project	Need for Project: Significantly reduce I/I; consolidate facilities, reduce operating costs, reduce sanitary sewer overflows. Scope of Work: Installation of 40,000 LF of new 12" and smaller SDR 26 PVC gravity sewer system and abandonment of 40,000 LF of existing 50+ yr old clay pipe sewer system; installation of 25,000 LF of CIPP lining in 12" and smaller 50+ yr old clay and concrete pipe sewer system; 40,000 LF of 4" sanitary sewer service lines to replace existing 50+ yr old bituminous wood fibre pipes and clay pipes; 4000 LF of new 12" force main pipe to replace 50+ year old pipe; 150 new gravity sewer manholes; interior lining of 100 existing gravity sewer manholes, 200 point repairs of existing gravity sewer system, consolidation of pump facilities with construction of a single new sewer lift station to allow abandonment of six existing small sewer lift stations. Project Benefits: Significantly reducing I/I Reduce operating cost by reducing electrical costs associated with pumping, reducing wastewater treatment costs, reducing spot repair costs, reducing repairs associated with root intrusion, reduce root intrusion chemical costs, reduce maintenance cost by reducing #"s of pump stations, reduce sanitary sewer overflows that harm the sensitive coastal environment and damage the ecosystem, reduce raw sewage dumps to drainageways that discharge to coastal beach areas and cause health hazards for residents and vacationers enjoying recreational activities along the coast line, reduce raw sewage dumps to the streams and discharge to Gulf waters damaging fishing and shellfish industry.	Jackson County	Yes	No	Yes	No	Yes	Yes	100	Yes	No		15745027	1574502.7	
	Seafood	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 fishery'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 FIP' (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	No	No	Yes	No	No		Yes	Yes		391073	0	
	Seafood	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	No	Yes	No	No	Yes	10	Yes	Yes		1500000	0	
	Seafood	5531	2/14/2017	Atlantic Street Sewer Collection System	Proposed project includes the installation of low pressure sanitary sewer force mains, grinder stations, associated valves and pump stations to connect approximately 75 existing houses to a lower pressure grinder sewer system. This collection system would allow for collection and treatment of sanitary sewer in a low lying, tidally influenced area. Currently, during heavy rains and high tides, the on site treatment systems (primarily septic tanks) are discharging raw sewage to nearby drainage systems and thus contaminating the local environment and canals.	Hancock	Yes	No	Yes	No	No	Yes	100	Yes	No		3000000	0	
	Seafood	5533	2/16/2017	Hancock County Sewer Force Main Beach Crossings	This project consists of replacing existing above grade sewer force main crossings with bored in place crossings that cross approximately 12 existing natural drainage ditches along Beach Blvd. These crossings serve to transport sanitary sewer from various areas of southern Hancock County and include major users such as The Silver Slipper Casino. The crossings constitute constant maintenance due the frequent immersion in salt water during storm or high tide conditions. They also pose an environmental threat due to the location of the crossings and close proximity to the MS sound should any leaks occur. The proposed crossing would consist of an HDPE casing pipe and HDPE carrier pipe which would be fused to the existing force main thus virtually eliminating any maintenance and likelihood of any future leaks.	Hancock	Yes	No	Yes	No	No	Yes	100	Yes	No		500000	0	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		1711190	0	Monitoring
	Seafood	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 City's bayous and the Mississippi Sound.	Jackson	Yes	Yes	Yes	Yes	No	Yes	95	Yes	No		10000000	0	
	Seafood	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 south'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 College'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, visitor'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	50	Yes	Yes		9000000	0	

	Seafood	5543	6/1/2017	Graveline Bayou Inlet Restoration	Graveline Bayou is relatively an undisturbed estuary in South Mississippi that supports salt and brackish marsh areas, along with several oyster beds throughout this estuarine bay and bayou. Furthermore, it supports an abundance of wildlife that makes this area an excellent location for fishing and birdwatching. As development materialized further inland, erosion has attributed to much loss of wetlands, other native vegetation along the shoreline and muddy/sand beach areas at the inlet. This narrowed inlet aided in a full self-scour of the channel alignment of the near shore waters and permitted ease of navigation. With the ongoing erosion of this inlet, water velocities are diminished and it is not able to adequately keep the navigational channel cleared of sediment, thus resulting a change of course, degrading coastal habitat and the need for more maintenance dredging to support marine use of waterway. The scope of this project would be restore the inlet to a prior year boundary that would be conducive to achieving similar ecological benefits once met prior to the inlet eroding. It would be the intent to establish a protective jetty around the designed boundary of both sides of the inlet to re-establish the original width. The jetty, which would be comprised of local material dredged from the near shore or inland areas of this Bayou. The jetty would incorporate native vegetation and, if necessary, a portion would be hardened to ensure stability of structure to withstand the regular impact from tidal flows and storm surge. Once the jetty was constructed and fortified, the interior area of the re-established boundary would be utilized as a Beneficial Use Disposal Site for placement of suitable dredge spoils for the purpose of replacing this eroded shoreline. Ideally, as continued maintenance dredge materializes within the area, said dredge spoils if deemed suitable could be placed within this Beneficial Use Site. Such action would yield lower dredge costs due to proximity of dredge disposal site and would permit government agencies more opportunities to dredge needed bayous for the purpose of flood minimization and enhanced recreational access. Upon completion of the proposed Beneficial Use Site, native vegetation would be planted to establish the ecological environment which once existed for expanding the native wildlife's habitat. The project benefit would be to restore this pristine estuary and bay back into a sound ecological state, re-establish the lost habitat area and to minimize the required maintenance dredging in the near shore waters which is vital to support the discharge of this watershed and navigable access.	Jackson	Yes	No	Yes	No	Yes	Yes		Yes	No		6000000	0	
	Seafood	5549	5/1/2017	Old St Martin Wastewater System Rehabilitation and Replacement Project	Construct a new 70,000 LF gravity sewer collection and 60,000 LF of cured in place gravity sewer system to replace old dilapidated sewer system of clay sewer pipe, brick manholes and unreliable pressurized residential grinder system (600 units). New collection system will be highly reliable system of modern materials of construction with fail-safe systems to prevent sanitary sewer overflows at old collection manholes and at unreliable residential grinder stations subjected to clogging and failure of numerous electrical components. Sanitary sewer overflows in the Old St Martin area can inject harmful bacteria and viruses that damage the coastal environment including oyster bed reefs, fish and other marine life. These bacteria and viruses can also find their way back into humans by ingestion. Fears of virus mutation in marine life and potential for transmission back to humans.	Jackson	Yes	Yes	Yes	No	Yes	Yes	100	Yes	No		10000000	1000000	
	Seafood	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 RFQ'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	Yes	Yes	Yes	No	Yes		Yes	No		100000	0	
	Seafood	5749	10/12/2017	Understanding the oyster larva transportation system in the western Mississippi Sound	Please see attached Oyster restoration is dependent upon putting oysters in locations that 1) provide a suitable environment and 2) receive viable larvae from â€˜upstream reefs' and provide viable larvae to â€˜downstream reefs.' There is a notion that Bay St. Louis reefs provide larvae for much of Mississippi's harvestable reefs but this has yet to be confirmed. The objective of this project is to understand the larval transportation network in the western Mississippi Sound. This objective will be met through two tasks: 1) determining the locations of oyster reefs in Bay St. Louis and 2) modeling the larvae transportation system using a hydrodynamic model.		Yes	No	No	No	Yes	No		Yes	No		0	0	
	Seafood	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 Governor'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 species' 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 resource for Native Americans for thousands of years, as evidenced by shell middens at many sites along or near the Gulf Coast. The calcium carbonate shell of the oyster has also long been used for a variety of non-food	Harrison	Yes	No	No	Yes	Yes	No		Yes	Yes		9360000	0	
	Seafood	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, Jackson,Hancock, Mobile,St Tammany,Stone, Pearl River	Yes	Yes	No	Yes	Yes	Yes		Yes	No		300000	50000	
	Seafood	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 Mississippi'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	No		Yes	Yes		1000000	50000	
	Seafood	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 Mississippi'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	No	No		Yes	Yes		1000000	50000	
	Seafood	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 Mississippi'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	No		Yes	Yes		10000000	0	

	Seafood	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	No	No	Yes	Yes		Yes	Yes		750000	50000	
	Seafood	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		250000	0	
	Seafood	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	No	Yes	No		Yes	Yes		250000	0	
	Seafood	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 Governor'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	No	Yes	Yes		Yes	Yes		250000	0	
	Seafood	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	No	No	No	Yes	Yes		Yes	Yes		2000000	0	
	Seafood	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, 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. 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 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	Yes	No	Yes	No	Yes		Yes	No		2400000	240000	
	Seafood	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	No	No	No	No	No		Yes	Yes		300000	0	
	Seafood	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	No	No	Yes	Yes	Yes	17	No	Yes		290000	0	

	Seafood	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 fishermen' 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: 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	No	No	No	Yes	No		No	Yes		16	0	
	Seafood	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	No	Yes	Yes	Yes	Yes		Yes	No		25	431000	
	Seafood	5859	11/5/2018	Mississippi Gulf Coast Near Shore Water Quality Project	This Storm Water Filtration Project is proposed to address the ongoing poor near shore water quality issues which continuously plague the Mississippi Gulf Coast. Each year, segments of our coastline have "Water Contact Advisories" posted as a result of elevated bacteria levels found within the near shore waters. These Advisories are to discourage individuals from accessing these areas and being a tourist destination, this overall perception has a negative lasting impact. Although there are several aspects of addressing this problem underway, such as upgrading sanitary sewer systems and implementing Eco-Friendly "Green" solutions, they do not fully address all of the bacteria sources contributing to these periods of elevated bacteria levels within our near shore waters. This Storm Water Filtration System technology is designed to capture the storm water run off during rain events, force through a treatment process to remove sediment and bacteria, retain the contaminants for disposal within the sanitary sewer system and return the treated storm water back into the discharging outfall. Ideally, the treatment facility should be positioned near the discharge outfall location or as close as geographically permitted to maximize the area of watershed treated. However, this technology can be placed in strategic locations based on existing conditions to treat various segments throughout a watershed. This flexibility of an adaptable design specific to existing conditions, makes for an ideal approach to treat storm water run off for clean acceptable near shore water quality. A more detailed presentation is attached with this project information.	Harrison	Yes	No	Yes	No	Yes	Yes	95	Yes	No		12000000	0	
	Seafood	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 applicant'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, Â¼ 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	No	Yes	Yes		Yes	Yes		0	0	
	Seafood	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: â€¢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. â€¢Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. â€¢Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. â€¢Opportunities for low impact recreational activities such as kayaking, birdwatching, fishing, and other wildlife observation â€¢Adds to complete corridors of conservation land.	Harrison	Yes	Yes	Yes	No	Yes	No		Yes	Yes		0	0	
	Seafood	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	No	No	No	No	Yes	100	Yes	Yes		15700000	500000	

	Seafood	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	Yes	No	Yes	No	Yes		Yes	No		$ 8,400,000.00	###########	
	Seafood	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 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	No	Yes	No		Yes	Yes		$ -	$ -	Land Acquisition
	Seafood	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	No	No	No	No	Yes	100%	Yes	Yes		###########	$ 500,000.00	
	Seafood	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	72%	Yes	Yes		$ 3,250,000.00	$ -	
	Seafood	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	No	Yes	No		Yes	Yes		$ -	$ -	Land Acquisition

New	Seafood	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	No	No	No	No	Yes	100	Yes	Yes		15700000	500000	
New	Seafood	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	No	Yes	72	Yes	Yes		3250000	0	
New	Seafood	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	No	Yes	No		Yes	Yes		0	0	Land Acquisition
New	Seafood	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	Yes	No	Yes	75	Yes	Yes		2000000	0	
New	Seafood	5892	7/31/2019	Hancock County Utility Authority - Kiln / Delisle Phase 3	This project is Phase 3 of the area East of the Hancock County Arena. It will be to install a sewer collection system with grinder pumps and lift stations in the designated area to connect approximately 80 homes and discontinue the use of septic tanks. These tanks are close to creeks, streams and bayous that empty out through Rotton Bayou into the Bay of St. Louis and eventually into the Gulf of Mexico. Rotten Bayou is on the EPA list of impaired waterways. The wastewater from this area will then be transported to the Northern Regional Wastewater Treatment Plant for proper treatment.	Hancock	Yes	No	Yes	No	Yes	Yes	70	Yes	No		2529550	0	
New	Seafood	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	No	Yes		Yes	Yes	COMPLETE PROTECTION FROM STORM SURGE	100	0	
New	Seafood	5956	12/3/2020	Convert Highway 90 to a Raised Highway in Portions of Jackson County	On the eastern end of Jackson county, portions of Highway 90 act as a levy restricting the natural flow of water from nearby rivers such as the Pascagoula. Much of this area, from the intersection of Highway 90 ad Highway 63 all the way to the Mississippi/Alabama state line, is surrounded by marsh, wetlands and estuaries which drain into the Mississippi Sound. Currently, adjacent rivers are forced to drain through the handful of bridges, mainly short in length, thereby reducing the marshlands natural ability to filter this river water of the nutrient loading which happens upstream and which can be detrimental to the marine ecosystem in the Mississippi Sound and beyond. By converting Highway 90 to a raised highway, similar in construction to the Mobile Bay Causeway, the watershed would revert closer to it's origins and in doing so contribute to increased water quality and potentially more productive nursery grounds for many of the commercially and recreationally targeted species fish, as well as shrimp, crabs and oysters. This same concept of raising the highway could also lend itself to the portion of Highway 90 which spans the East and West legs of the Pascagoula River (on the boundary of Pascagoula and Gautier). My only caveat is that before undertaking such a project, one would need to ensure that raising the eastern most portion of Highway 90 in Jackson county would not cause undue harm, via flooding, to families which reside south of the highway in that area.	Jackson	Yes	No	No	No	No	Yes		No	No		0	0	
New	Seafood	5957	12/3/2020	Waste Water Treatment Changes	This project focuses on the water treatment plants on the Lower Pascagoula River in Gautier and Pascagoula. Both plants are antquated and in need major improvements and/or relocated to a more desirable location. The MDMR tests the water outside the mouths of both the West and East Pascagoula Rivers and the water contains E.coli bacteria which exceed the limits for healthy oyster production. This project would be a benefit to the health of the ecosystem as well as to the citizens of the great state of MS that use these waters for recreational activities.	Jackson	Yes	Yes	Yes	No	No	Yes		Yes	No		0	0	
New	Seafood	5987	7/16/2021	Springwood Sewer Collection System	This project would provide sanitary sewer service for the Springwood Subdivision. The project will use individual grinder systems at each residence that will discharge into a small diameter sewer collection system. A proposed sewer lift station at the corner of Oak and Kingswood will pump the sewer through a 4-inch sewer force main to the nearest lift station by Cypress Street on US Hwy. 90.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		2573150	0	
New	Seafood	5988	7/20/2021	Bay St. Louis Lift Station Upgrades	The lift station will need upgrades to both pumps and the electrical system to increase capacity. These upgrades are needed do to the possibility of overflows near waterways and wastewater going out into the Bay of St. Louis. Also, pipes and valves will need to be replaced.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		600000	0	
New	Seafood	5989	6/4/2021	NASA Wastewater Connection to HCUA	This project consists of connecting to a force main that NASA has constructed and continuing to run that force main from the North gate of NASA Eastward to the entrance of HCUA's Northern Regional Wastewater Treatment Plant. It will consist of 5 lift stations and 7 miles of pipe. This will allow for NASA officials to shut down both the lagoons permanently and also eliminate the outfall line into the Pearl River.	Hancock	Yes	No	No	No	Yes	Yes	100	Yes	No		10250000	2000000	
New	Seafood	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	No	Yes	No	No	Yes	100	Yes	Yes		4500000	0	

UNFUNDED PORTAL PROJECTS (WHITE CELLS)

Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	SEAFOOD	SMALL BUSINESS	TOURISM	NONRESOURCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
Seafood	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	Yes	Yes		Yes	No		4881792	0	
Seafood	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	No	Yes		Yes	Yes	commercia	3500000	0	
Seafood	98	11/30/2013	Artificial Reefs	I have been propagating fin fish in front of my house for 15 years prior to Katrina on an artificial reef in front of my house. My stock matures quicker and spawns sooner than the natural stock. I'll be happy to pass my information on to the state. All I ask is that the state assign me a biologist to monitor the results and if satisfactory to MDEQ, the results can be easily and cheaply duplicated.	Harrison	Yes	No	No	No	Yes	No		No	No		0	0	
Seafood	1147	7/12/2011	Restoring Finfish of Importance to the Northern Gulf of Mexico	(ORIGINAL ID#601) Aqua Green, LLC is an established aquaculture firm located in Perkinston, MS. The company is involved in production of freshwater and marine finfish for food as well as for restoration purposes. The following juvenile marine finfish species can be produced by Aqua Green to help restore northern Gulf of Mexico coastal waters (prices/species available upon request): red drum (Sciaenops ocellatus), spotted seatrout (Cynoscion nebulosus), cobia (Rachycentron canadum), southern flounder (Paralichthys lethostigma), Florida pompano (Trachinotus carolinus), and Atlantic croaker (Micropogonias undulates). In addition to the company's operational status with completed facilities, Aqua Green has established working relationships with the following partners: Auburn University, Gulf Coast Research Laboratory, Louisiana State University, Louisiana Universities Marine Consortium, Mississippi Dept. of Marine Resources, Mississippi State University, Mote Marine Laboratory, Southern University, and USDA. Aqua Green can provide immediate impact to the restoration of finfish of importance to northern Gulf of Mexico inshore and nearshore waters.	Hancock Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		5000000	0	
Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		4300000	0	
Seafood	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	No	Yes	Yes	Yes		Yes	No		8500000	800000	
Seafood	1186	8/19/2011	County Fishing Pier near Biloxi Bay Bridge	(ORIGINAL ID#852) This project consists of extending the County fishing pier near Biloxi Bay Bridge on longer concrete pilings ($200,000). Project mobilized; immediately shovel ready. This project ties in to walking path on Front Beach and parking for ideal access to Biloxi Bay and Mississippi Sound. It is a site of children's fishing rodeos.	Jackson	Yes	No	Yes	No	No	Yes		No	No		200000	0	
Seafood	1199	3/6/2012	Oyster, Fish, Habitat and Water Quality Monitoring associated with Oyster Cultch Restoration and Artificial Reef Project	(ORIGINAL ID#11647) Eco-Systems, Inc. (Eco-Systems) is pleased to provide this proposal to conduct baseline conditions sampling and on-going monitoring activities associated with the restoration of 1,430 acres of oyster cultch and the creation of 100 acres of artificial reefs. Eco-Systems proposes to complement and enhance on-going DMR/DEQ coastal restoration efforts and support the currently approved BP Early Restoration Projects as identified below. Eco-Systems proposes to monitor oysters, fish, habitat, and water quality before, during and after the restoration of the 1,430 acre oyster cultch restoration project and the expansion of 100 acres of nearshore artificial reef. This monitoring effort is designed to complement the DMR projects and on-going oyster and artificial reef monitoring efforts currently in place in coastal Mississippi. The data collected will be utilized to establish baseline conditions and to monitor trends at both oyster restoration and artificial reef project locations. Creation of oyster beds and artificial reefs have been linked to improved water quality and critical fish habitat. The proposed scope of work will strengthen these claims by providing "hard data" to support the theory of improved conditions in Mississippi coastal waters. It would be our hope to use the analytical results to demonstrate if water quality improvement can be tied to the restoration efforts; to document the growth, health and survival of oysters in newly created beds; to record the anticipated increased diversity and density of fish in the restored and created artificial reefs; and to demonstrate the improvement in overall fish/oyster habitat in coastal waters of Mississippi. Scope of Work: Two project tasks are proposed: (1) an initial assessment to establish baseline conditions and (2) on-going monitoring for ten years (quarterly monitoring for two years to determine seasonal variations; semi-annual basis for an additional three years; and annual monitoring for an additio nal five years). The objective of the proposed monitoring efforts is to establish baseline conditions and document anticipated improved coastal conditions over time such as improved water quality, oyster population, fish diversity/density, and habitat. The following scope of work is proposed and identified as separate Phases: Phase 1: Review Background Information. a. Obtain site drawings and background information. b. Obtain information on location and condition of oyster beds and reefs from DMR. c. Obtain best available imagery of sites. d. Identify dominant species at project sites and determine the typical range of tolerance. e. Contact Gulf Coast Research Laboratory to obtain relevant site information pertaining to biological and physical characteristics of areas. f. Contact MDEQ and request their available sampling data and analytical results for the coastal project areas. Phase 2: Initial Field investigation and Preparation of Sampling Plan. a. Schedule field visit in coordination with DMR and DEQ. b. Conduct visual assessment of general site conditions. c. Identify monitoring locations representative of overall site conditions. d. Prepare sampling plan and submit to DMR/DEQ for concurrence and approval. Phase 3: Conduct Assessments (Baseline Sampling and On-going Monitoring) a. Fish Monitoring at Identified Sampling Locations at 100 Acres of Nearshore Artificial Reefs: The Eco-Systems team will sample baseline conditions of fish and shellfish at the artificial reef locations and provide on-going monitoring at the sample locations identified during the initial baseline assessment event to document fish/shellfish use of reefs over time. The scope will include fish and shellfish assessment and water quality sampling at designated sampling locations specified within sampling zones. Sampling zones will be discussed with and approved by DMR and DEQ prior to mobilization. Eco-Systems recommends monitoring fish diversity, density and size utilizin g sampling methods to include use of: gill nets, trawl nets, cast nets, and hook-and-line. Water quality will also be determined at each of the sampling locations. A collection permit will be obtained prior to mobilization. The primary target species to monitor will include: - Atlantic croaker (Micropogon undulates) - Speckled trout (Cynoscion nebulosus) - Black drum (Pogonias cromis) - White trout (Cynoscion arenarius) - Speckled trout (Cynoscion nebulosus) - Red drum (Sciaenops ocellata) - Sheepshead (Archosargus probatocephalus) - Southern kingfish (Menticirrhus americanus) - Pinfish (Lagodon rhomboids) - Naked goby (Gobiosoma bosci) - Blue crab (Callinectes sapidus) - Striped blenny (Chasmodes bosquianus) - Stone Crab (Menippe adina) - Oyster toadfish (Opsanus tau) - Eastern oyster (Crassostrea virginica) - Skilletfish (Gobiesox strumosus) - Shrimp (variety of species) b. Oyster Monitoring at Identified Sampling Locations within the Restored/Created 1,430-acre Oyster Bed: The Eco-Systems team will sample baseline conditions of oysters at identified sample locations within the 1,430-acre oyster restoration area and will provide on-going monitoring of oysters over time. Eco-Systems team will utilize a modified Sampling Protocol for Projects in Public Oyster Areas from Louisiana. The following tasks are proposed: i. Sample oyster presence/absence, density (via square meter samples), oyster condition (reef condition (cultch type), substrate (bottom type, water depth, bottom and top water temperature, bottom and top water salinity, and observations of oyster reef	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		2500000	0	
Seafood	1205	4/25/2012	Continued Shrimp Fishing Effort Data Collection Through the Use of an Electronic Logbook System in the Gulf of Mexico	(ORIGINAL ID#11685) Because the red snapper stock of the Gulf of Mexico is classified as overfished, the National Marine Fisheries Service has regulated the directed commercial (IFQ system) and recreational (size and trip limits and closed seasons) red snapper fisheries to reduce mortality of large juvenile and adult fish. To reduce the fishing mortality of small juvenile fish, the NMFS has also regulated the shrimp trawl fishery; a fishery that is thought to bottleneck adult populations. Disagreement has existed regarding the magnitude, age composition, and monthly distribution of shrimp trawl red snapper bycatch in time and space. The Foundation completed a research study that augmented the collection of electronic logbook (ELB) data through the use of observers in the fishery. The goal was to enable the fishing industry to evaluate and address fishery management issues, including the estimation of shrimp fishing effort and bycatch. The ELB was developed by LGL Ecological Research Associates, Inc., to directly measure shrimp fishing effort, thereby reducing the dependence on modeling to provide better estimates of effort and red snapper bycatch. Over the course of a 3 year pilot study, ELB systems were placed onboard commercial shrimp fishing vessels to collect fishing effort data. Results from this study indicated that the ELB system accurately estimated the fishing practices of a vessel on a per trip basis and that individual tows could be identified. Currently, shrimp fishing effort data recorded by ELBs are used as a proxy for estimating red snapper bycatch mortality in the offshore shrimp fishery. We propose to continue the Foundation's ELB observer program that collects data with the ELB system and observers to make the results of the previous work more robust. Importantly, this will increase the data available to verify models used by scientists to compute red snapper bycatch levels within the fishery. Specifically: 1) Complement an electronic logbook (ELB) study with onboard observers to collect data on fishing effort, red snapper bycatch, and shrimp landings within the Gulf of Mexico; 2) Analyze all observer collected data to further ensure that ELB landings estimates are accurate and defensible; and 3) Determine the spatiotemporal abundance of juvenile red snapper, compute a total mortality (Z) estimate for shrimp-trawl red snapper bycatch, and conduct a formal cohort analysis (VPA) on all observer collected red snapper data. The ELB program is vital to managing the shrimp and red snapper fisheries in the Gulf and needs to be continuously funded, especially as the impacts of the Deepwater Horizon oil spill become better understood.	Hancock, Harrison, Jackson	Yes	No	No	No	No	No		No	No		500000	0	
Seafood	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	No	No	No	No	No		No	Yes		750000	0	

	Seafood	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	No	No	No	Yes	No		No	Yes		1500000	0	
	Seafood	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 fi s 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	No	No	No	Yes	No		No	Yes		60000000	0	
	Seafood	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	No		Yes	Yes		0	0	
	Seafood	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	No	No	No	No		Yes	Yes		0	0	
	Seafood	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 diversionways 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 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	No	No	No	Yes	No		No	Yes		4900000	0	
	Seafood	1572	6/22/2011	Sub tidal oyster reef restoration in Biloxi Bay, Mississippi	(ORIGINAL ID#216) The sub tidal oyster reef habitats in coastal Mississippi have been degraded over time due to poor riverine water quality, questionable land use practices in watersheds, shoreline hardening and natural processes such as hurricanes. Substantial expanses of suitable bottom area exist in all Mississippi bays and estuaries. The proposed project will construct oyster reef habitat using natural oyster shell, on suitable water bottoms. Careful scientific monitoring will document long term success. Restoration of oyster reefs in Biloxi Bay began in 2007, with the construction of a 10 acre pilot project. The reef was later expanded to 22 acres. Suitable water bottoms exist in the Bay for further restoration. TNC has requested additional funding from FishAmerica to add an additional 10 acres of reef. Project time line: Permitting and project design: July 2011 Pre deployment sampling: October 2011 Contracting: December 2011 Reef construction: May 2012 Post construction monitoring: until May 2017 When compared to other areas, Mississippi's oyster reefs are in fairly good condition, but significant losses have occurred. Restoration of sub tidal oyster reefs produces increased biomass and species diversity, along with a shift to important sport fish, including spotted sea trout, white sea trout, black drum, and southern kingfish (ground mullet). Resident and migratory shorebirds will also benefit. It is unlikely that restored oyster reefs in Bay St. Louis will have any effect on state or federal listed species.	Harrison	Yes	No	No	No	Yes	No		No	No		875000	0	
	Seafood	1573	6/22/2011	Sub tidal oyster reef restoration in Bay St. Louis, Mississippi	(ORIGINAL ID#217) The sub tidal oyster reef habitats in coastal Mississippi have been degraded over time due to poor riverine water quality, questionable land use practices in watersheds, shoreline hardening and natural processes such as hurricanes. Substantial expanses of suitable bottom area exist in all Mississippi bays and estuaries. The proposed project will construct oyster reef habitat using natural oyster shell, on suitable water bottoms. Careful scientific monitoring will document long term success. Restoration of oyster reefs in Bay St. Louis began in 2007, with the construction of a 2 acre pilot project. In 2009, a larger, 14 acre project was constructed nearby. Sampling of both reefs in early 2011 showed that both reefs are fully functional, and contributing to the productivity and biodiversity of the Bay. Suitable water bottoms exist in the Bay for further restoration. TNC has requested additional funding from NOAA to add an additional 10 acres of reef. Project timeline: Permitting and design: July 2011 Pre deployment sampling: October 2011 Contracting: December, 2011 Reef construction: May 2012 Post construction monitoring: until May 2017 When compared to other areas, Mississippi's oyster reefs are in fairly good condition, but significant losses have occurred. Restoration of sub tidal oyster reefs produces increased biomass and species diversity, along with a shift to important sport fish, including spotted sea trout, white sea trout, black drum, and southern kingfish (ground mullet). Resident and migratory shorebirds will also benefit. It is unlikely that restored oyster reefs in Bay St. Louis will have any effect on state or federal listed species.	Harrison	Yes	No	No	No	Yes	No		No	No		375000	0	
	Seafood	1585	7/22/2011	Increased Catch and Effort Reporting for the Gulf of Mexico's Marine Recreational Fishery Based on 1-month waves	(ORIGINAL ID#648) Recreational anglers lost access to a considerable portion of federal and state waters in the northern Gulf that were closed to fishing during the BP oil disaster. Fishery closures amount to lost ecosystem services or human uses of resources that the Natural Resource Trustees are required to estimate and offset through appropriate compensatory restoration projects. One strategy for compensating the angling public for lost fishing access is making investments in fishery management tools that help keep fishery resources healthy and available to anglers. One such tool is the Marine Recreational Fisheries Statistics Survey (MRFSS), which collects data on recreational fisheries data used to estimate total catch. The public can be compensated for lost access to fishing grounds during the 2010 Deepwater Horizon BP oil spill by establishing a one month survey reporting waves versus the current two month reporting waves of MRFSS. A more timely reporting system would benefit the public by lowering the likelihood of overfishing and accountability measures (i.e., penalties), which if triggered, could result in a shorter fishing season. Increased data collection and reporting periods will lead to more precise and timely catch estimates. MRFSS in the Gulf of Mexico does not produce timely fishery catch and effort estimates required by managers. The MRFSS catch and effort estimates are based on a two month data collection waves with estimates produced up to 45 days after the end of a wave. For reporting to be on one month waves, with sufficient precision for management, an increase in sampling will need to occur. MRIP proposes to meet this goal; however a concurrent increased funding allotment has not been secured. Survey costs, on average, will need to double from the current level of funding. The National Research Council's 2006 Review of Recreational Fisheries Survey Methods, recommended for one month reporting of catch and effort estimates be implemented. The Marine Recrea tional Information Program (MRIP) is redesigning the MRFSS survey to accomplish this task. As an example, the red snapper season, as currently defined, closes well before the estimates are produced. The current estimation methodology has inadvertently allowed the recreational fishery to overharvest red snapper in twelve of the last twenty years, and has triggered fishery accountability measures; such as shorter red snapper seasons for recreational anglers. A timely and accurate recreational data reporting system will allow fishery managers to be proactive in the Gulf of Mexico, improving their ability to predict fishing trends and prevent overfishing.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No		10000000	0	
	Seafood	1586	7/22/2011	Enhancements to marine charter for-hire fishing surveys	(ORIGINAL ID#667) Make enhancements to the charter for-hire telephone fishing effort survey for improving fisheries management. Link to injury: Members of the public who hire charter boats to fish offshore lost access to a considerable portion of federal and state waters in the northern Gulf of Mexico that were closed to fishing during the BP oil disaster. Charter boats provide access to offshore fishery resources for members of the public who do not own vessels themselves. Benefit and Rationale: A telephone survey is the primary method used by fishery managers to collect charter for-hire fishing effort, which helps track quota usage. Making enhancements to the survey, such as increasing frequency and sample size, would result in more effective monitoring of fishing effort, improved management and possibly longer fishing seasons. Better data from enhanced telephone surveys would help fishery managers be more responsive and adaptive in their management of fishery species exposed to oil. Other: This project could be compensatory in nature if a reduction in fishing that anglers experienced in 2010 due to oil-related fishery closures is offset in the future by extending fishing seasons made possible through better (more accurate and precise) data on fishing effort. For example, an enhanced charter for-hire telephone survey in summer 2010 increased the precision of catch and effort estimates that allowed, in part, the red snapper fishery to reopen in the fall of 2010 after a summer closure.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No		No	No		5000000	0	

	Seafood	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 world's great seafood producers. Since it'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. Mississippi'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 region'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		7549904	0	
	Seafood	1597	9/7/2011	Sealife Hatchery	(ORIGINAL ID#1020) This project addresses the extensive damage done by the Deepwater Horizon event on natural resources, namely fish, oysters, and shrimp. Specifically, the project would establish hatcheries for fish, oysters, and shrimp. It would be funded for 20 years by a trust so that ongoing replenishment of seafood would be available to residents and attract visitors to the coastal area. Suggested locations consist of a site near Bayou Caddy, West Pearl River, or the Jordan River.	Hancock	Yes	No	Yes	No	Yes	No		No	No		0	0	
	Seafood	1601	9/12/2011	Enhancements to marine private recreational fishing surveys	(ORIGINAL ID#1094) Make enhancements to the marine private recreational fishing survey to improve timeliness and spatial resolution of catch and fishing effort data for better management. Link to Injury: Private recreational anglers lost access to a considerable portion of federal and state waters in the northern Gulf that were closed to fishing during the BP oil disaster. Therefore, the angling public must be compensated for lost access to fishing as a service. Benefit and Rationale: Improving the private recreational survey in the Gulf of Mexico will help keep fishery resources healthy and available to anglers. Specifically, improving the timeliness and spatial resolution of catch and effort data can help fishery managers keep total catch within prescribed fishing limits and prevent recreational anglers from exceeding their quotas and incurring penalties. These improvements would benefit the public by lowering the likelihood of overfishing and accountability measures, which, if triggered, could result in shorter fishing seasons in the future.	n/a	Yes	No	No	No	Yes	No		No	No		0	0	
	Seafood	1603	4/21/2011	BioRestore?	(ORIGINAL ID#2106) BioRestore? will contribute to help mitigating marine resource status quo. BioRestore? is a process based on the Capture and Culture of Post-larvae (PCC) marine animals. The idea is to effectively rescue a small proportion of post-larval fish before predation, then rear and release them to boost marine ecosystem recovery. Restocking can thus be achieved for a wide range of coastal fish species, and pre-release juveniles are conditioned to survive in the wild before restocking. We feed them on live food, and a patented halfway house is created placed in the nursery where the fish can become familiar with them. Pieces of the halfway house are then released in the same area as the fish, thus reducing stress and encouraging the juveniles to settle at that location. BioRestore? is a 3-step all inclusive marine restoration process in full accordance with the maritime status quo and the regulatory context. It simultaneously aims to monitor biodiversity losses, to mitigate impacts and help rebuild stock of local species. This process is being used in the Mediterannean sea.	n/a	Yes	No	No	No	Yes	Yes		No	No		300000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		60000000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		60000000	0	
	Seafood	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 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	No	No	No	Yes	No		No	Yes		2500000	0	
	Seafood	1612	11/21/2011	5-Year Increase in Gulf of Mexico Fishery Observer Coverage for Monitoring Marine Mammals, Sea Turtles, and Bluefin Tuna	(ORIGINAL ID#11523) Temporary (5-year) increase of vessel coverage for Gulf of Mexico shrimp trawl, shark gillnet and pelagic longline observer programs to quantify the extent to which marine mammal, sea turtle, and bluefin tuna bycatch mortalty is a source of stress on injured populations. Going forward, these data will shed light on whether bycatch mortality is limiting recovery from injury related to the BP oil disaster and help managers identify restoration measures that can be implemented to shorten recovery times. A temporary but significant increase in observer coverage in the shrimp trawl, shark gillnet and pelagic longline fisheries is needed to improve estimates of marine mammal, sea turtle, and bluefin tuna bycatch rates and mortality in these fisheries. Additional observer coverage and the resulting observational data will help scientists determine to what extent bycatch is a source of mortality and stress limiting recovery from DWH oil spill injuries. Additional biological samples gathered through observers could reveal lingering sub-lethal injuries resulting from oil exposure and help scientists detect impacts on marine mamma, sea turtle or bluefin tuna populations still recovering from the DWH oil disaster. In fishery observer programs around the country, biological samples (organs, tissue, etc) are collected from marine mammals and sea turtles incidentally taken in commercial fisheries. An increase in observer coverage in the Gulf would likely mean an increase in the number of samples for analysis of hydrocarbon and/or chemical dispersant signatures. These data would help scientists track effects at the genetic and population level and provide valuable information to guide restoration efforts. Together, bycatch and biological data will help inform additional restoration measures needed to help the recovery of affected species. A Gulf of Mexico fisheries observer program already exists, providing the organizational structure for additional monitoring of marine mamm al and sea turtle fishery interactions. Note that the estimated cost of $6.5 million is per year over five years. The estimated cost is based on the amount allocated to the Southeast Regional observer program in FY2009.	n/a	Yes	No	No	No	Yes	No		No	No		6500000	0	
	Seafood	1613	11/28/2011	Shrimp Restoration	(ORIGINAL ID#11531) We believe we have a very unique hatchery. We have been in the R&D stage for three years and believe we are the only commercial hatchery in the U.S. that has had success raising domestic shrimp at the hatchery level. As a Florida company, Scientific Associates is very concerned about the health of the gulf seafood industry including the fishermen, the processing plants, restaurants, and all those local businesses that depend on a thriving shrimp industry. Given the recent dramatic falloff in wild shrimp catch in the Gulf of Mexico, (which may or may not be related to the effects of the BP oil spill), there is a need to replenish the wild stocks in time for the 2012 harvest. Scientific Associates of Florida has perfected hatchery techniques so that they can produce hundreds of million of post larval shrimp (PL's, i.e. baby shrimp) , typically transported at the 10 days into the larval phase (PL10's). They have been raised in a closed, fully recirculating system that has now been in continuous operation for three years. There are no antibiotics used. The shrimp are free of disease. The PL's are first generation offspring coming from brood stock (mom and dad) taken directly from the Gulf of Mexico waters. With this technique, the shrimp can be raised in appropriate water conditions for the locations where they would be released, i.e. similar pH and salinity to maximize survival rates. This is an opportunity to restock the estuaries with hundreds of millions of viable larval shrimp and bring the Gulf shrimp industry back to health. This restocking program can be for a short duration or on-going. The available species are Litopenaeus setoffrus (gulf white shrimp) and Fartantepenaeus Duorarum (gulf pink shrimp). In order to change production to produce this product for Spring 2012, arrangements would need to be agreed fairly soon. Please feel free to contact me with any questions or suggestions and please feel free to pass this e-mai l along to appropriate individuals. Dave Brockwell President of Scientific Associates LLC 239-677-8914 or e-mail at dave@scientificassociates.us	n/a	Yes	No	No	No	Yes	No		No	No		0	0	

	Seafood	1618	2/7/2012	Upgrades to the Electronic Logbook Program for the Offshore and Inshore Commercial Shrimp Fishery for a 5-Year Period	(ORIGINAL ID#11609) Project: Upgrade the Gulf of Mexico shrimp fishery electronic logbook (ELB) program in order to improve the precision of shrimp fishing temporal-spatial effort and estimation of red snapper and sea turtle bycatch in the shrimp fishery. Specifically, this project will purchase new ELB units and make program enhancements necessary to expand ELB coverage up to 100 percent of the offshore shrimp fleet and a higher percentage of the inshore shrimp fleets for a period of 5 years. Link to Deepwater Horizon Oil Spill Injury: In 2010, the estuarine and offshore waters upon which shrimp species depend were oiled, offshore and nearshore shrimp fisheries were closed and visibly oiled sea turtles were collected alive and dead from northern Gulf. Sharp declines in shrimp catch in SE Louisiana in 2011 may be related to habitat damage or adult or post-larval mortality caused by exposure to Deepwater Horizon oil or chemical dispersants used to break up oil. In addition, red snapper with lesions and other signs of a compromised immune system have been documented in the oil spill impact area, though cause and effect are not yet established. Benefit and Rationale: Inshore and offshore shrimp fisheries in the Gulf of Mexico are known to interact with sea turtles and juvenile red snapper. These two species? populations may have been detrimentally affected by the DWH oil spill in 2010. Sea turtle strandings in the Gulf of Mexico increased significantly since 2010 and have continued to rise since the BP oil disaster. More than 5,000 dead or weakened turtles washed ashore, or have been stranded, since the BP oil disaster. More than 460 sea turtles were found visibly oiled during oil spill response efforts and an unknown number died as a direct result of the disaster. ELB analysis provides fine-scale spatial data that can help identify sea turtle/shrimp fishery interaction hot spots. These data can assist managers in reducing the number of interactions and related sea t urtle mortalities through such means as time/area closures while potentially avoiding broad management measures like complete fishery closure. Shrimp fishing effort data recorded by ELBs are also a proxy for estimating red snapper bycatch mortality in the offshore shrimp fishery. Bycatch mortality estimates are important for determining whether management measures are needed to help red snapper populations exposed to oil recover from potential injury. The long-term effects of oil and chemical dispersants on shrimp species or their habitat remain unknown. Tracking the location and catch per unit of effort of shrimp can help scientists and fishery managers better understand trends in abundance and possible relationships between areas of low catch and oiled estuarine habitats. Expanding ELBs to the entire offshore fleet and making them available on a voluntary basis to a greater portion of the inshore fleet will improve the precision of sea turtle bycatch estimates needed to facilitate and track recovery of impacted sea turtle populations in the Gulf of Mexico. The recent increase in offshore shrimp fishing effort and potentially higher number of sea turtle interactions that could result also underscore the importance of ELBs in estimating sea turtle bycatch for developing mitigation and recovery strategies going forward. Description: Implemented through a joint reef fish/shrimp management plan amendment in February 2008, a statistically valid sample of shrimp vessel permit holders are randomly selected and must report shrimp fishing effort via an ELB. A simple ELB that records spatio?temporal fishing effort is currently used by approximately one-third of the federally permitted offshore shrimp fleet. Researchers have found these devices to be a reliable method for estimating sea turtle interaction and red snapper bycatch mortality in the Gulf of Mexico offshore shrimp fishery. NOAA has been making the ELBs available to members of the inshore shrimp fleet. A bout 150 inshore shrimp vessels use ELBs on a voluntarily basis. Upgrading this program to expand coverage in the offshore and inshore fleets will generate a wealth of fine scale spatial data. These data will allow scientists to better characterize the shrimp fishery?s effort and classify overlapping areas of fishing effort in regards to sea turtle and juvenile red snapper habitat areas. Determination of where and when this fishery interacts with sea turtle and red snapper populations may allow more fine-scale management of the fishery (versus the need for broader management measures) while reducing bycatch mortality, which in turn would offset injuries caused by the oil spill and help affected populations recover more rapidly.	n/a	Yes	No	No	No	No	No		No	No		6650000	0	
	Seafood	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 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 significant 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	No	No	No	Yes	No		No	Yes		2000000	0	
	Seafood	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	No	No	No	No	No		No	Yes		4800000	300000	
	Seafood	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	No	No	No	No	No		No	Yes		5000000	0	
	Seafood	1695	2/11/2014	Pass Christian - Small Craft Harbor	1. DESCRIPTION: This project will consist of the replacement of an existing concrete bulkhead wall which forms the west wall of the Pass Christian Small Craft Harbor. The wall is approximately 755 linear feet long. The wall separates South Heim Avenue from the small craft harbor basin. Inside the basin are piers used for commercial fishing and pleasure crafts, a restaurant establishment, an excursion pier used for commercial charter vessels. Small commercial fishing boats commonly use this area to offload seafood into trucks. The basic concept of the project is to construct an entirely new concrete wall just outside (toward the water) of the existing failing wall, as close to it as possible. After the new wall is complete and properly tied back, the space between the existing and new walls will be filled, and the top of the existing wall removed. A vicinity map is also attached, depicting the proposed project area. 2. EXISTING CONDITIONS: The exact age and character of the existing wall cannot be determined from available sources, but local residents have advised that it is approximately 60 years old. The cap wall of the existing wall has broken at many locations, allowing the concrete sheet piles to â€¢leansâ€• but toward the harbor by amounts which vary from 0â€• to approximately 12â€•.We have no information regarding how the wall was originally supported with a system of â€•atie-backs,â€• as would be normal for this type of wall. Backfill material is leaking through the open joints between the concrete sheet pile sections, as evidenced by numerous sinkholes behind the wall, which the city is continuing to backfill. 3. BENEFICIARIES: The designated beneficiaries for this project are the commercial fishermen who utilize the small craft harbor, charter fishing captains, recreational fishermen as well as the adjacent restaurant owner and those local residents who frequent the establishment and the seafood dealers and processors who occupy the leased parcels in the project area. As stated above in Section 1., the wall directly adjoins structures (i.e., pier used for mooring commercial fishing boats as well as offloading seafood from the wall; a restaurant; and, a pier used for mooring charter fishing vessels) used for commercial endeavors for approximately 60% of its length. It could therefore be argued that the commercial business enterprises collectively utilize 60% of the project, and the individual recreational fishermen utilize the remaining 40% of the project area. 4. IMPLEMENTATION: Preliminary engineering design and subsurface investigation have been completed. Final design will be undertaken when funding has been arranged, and should require approximately six months, including acquisition of environmental permits. Bidding and construction could realistically require an additional twelve months. It is proposed to implement the project by seeking competitive written bids from qualified contractors, based upon plans and a Project Manual prepared by the Consultants for the City. Because the City has some funds available through the Tidelands Trust Fund, a small section of the worst part of the failing wall has been completed and is going to be bid in the very near future. For the remainder of the project area, a single construction contract is contemplated, assuming that it can be fully funded, thus avoiding any future â€œphasingâ€• of the project. No â€œin-houseâ€• or â€œforce accountâ€• work is presently proposed.	Harrison	Yes	No	Yes	No	No	Yes	100	No	No		1868625	0	
	Seafood	1727	2/7/2014	Restore and Improve Long Beach Small Craft Harbor	Long Beach proposes to make significant restoration and improvements to its small craft harbor that will enhance the functional, aesthetic, and environmental components of the City's most visible public attraction. As one of the most loved an utilized harbors on the Coast, the City and the Long Beach Port Commission's plans for stabilizing and improving the functionality of the Long Beach Harbor will provide not only an added asset to the City of Long Beach, but an economic catalyst for the entire Mississippi Coast. The RESTORE Act funding will offset the devastating impact of the 2010 Oil spill to intended multi-year capital infrastructure improvements to Long Beach Harbor. Because expected revenue from enhanced and anticipated new leases, boat slip rentals, and potential economic developments ceased immediately, the revenue necessary to make aging infrastructure replacements and stability enhancements has not been available. Long Beach was unable to generate the revenue necessary to replace or upgrade the end-of life cycle (40+ year old) bulkhead, breakwater and other major components necessary to maintain the integrity of the infrastructure within the harbor, resulting in much greater than expected damage after even minor tropical events. Long Beach does have a tremendous advantage in executing RESTORE Act funds. The Long Beach Port Commission and a team of consultants have completed a Harbor Master Plan funded by CIAP grant. These Master Planning efforts can be leveraged so that a majority of any dollars spent will be used for actual construction - the plans and initial engineering will have already been completed. The Harbor Master Plan addresses the improvements of the harbor's existing infrastructure, upland areas and connection to the downtown, and the cost-effective expansion to the south of the current harbor to provide additional protection and functionality. The harbor infrastructure improvements will harden the harbor to minimize future hurricane damages, improve water quality and environments for marine habitat, and provide for economic and tourism developments.	Harrison	Yes	No	Yes	No	No	Yes	85	Yes	No		57210000	0	
	Seafood	1728	2/7/2014	Jim Simpson, SR. Memorial Fishing Pier	Create an artificial reef near Jim Simpson Pier to enhance recreational fishing.	Harrison	Yes	No	Yes	No	Yes	No		No	No		0	0	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		0	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	1774	3/20/2014	Graveline Bayou, Robert Hiram/Oakleaf Circle, Point Clear Restoration	This project will consist of removing sediment, water quality monitoring, and drainage improvements to the identified altered waterways. sediment removal allows for previously impeded green corridors to be restored. Previously, these water systems were only accessible at high tide. The goal of this project will be to retain some level of environmental and historic value of these highly altered systems. The efficiency of use will increase boating travel, both commercial and recreational, along the bayous and improve the adjacent communities' quality of life. Sediment removal and water quality monitoring amends the previous loss of recreational opportunity and increases the access to natural resources. Restored water systems have a greater capacity to manage stormwater runoff, erosion, and sedimentation which can negatively impact coastal marshes, beaches, and oyster reefs. By restoring these water systems to their baseline, a quality habitat for birds and wildlife negatively affected by the Deepwater Horizon Oil Spill can be provided.	Jackson	Yes	Yes	Yes	No	Yes	Yes		No	No		0	0	

	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		0	0	
	Seafood	1780	3/20/2014	Gulf Park Estates Bellefontaine Beach Restoration	This project will consist of a Wetland Coastal Preserves Program and Beach Restoration. The Wetland Coastal Preserves Program will target invasive species in and around the Gulf Park Estates and Marsh Restoration, ensuring that native flora and fauna thrive in the restored waterfront. The Bellefontaine Beach Restoration will rebuild and manage the Bellefontaine beachfront. It will serve to remedy or reduce the risks of future harm to the natural dunes and beach resources. The Preserve plan serves to enhance the ecological value of this important coastal habitat and manage the transition zone between the marsh, wetland, and beach areas within Gulf Park Estates. It will also strategically restore wetland and revitalize ecologically and economically important wildlife resources within Gulf Park Estates. the beach restoration will serve to preserve and protect the Bellefontaine shoreline, minimize economic losses caused by beach erosion, and maintain needed recreational and habitat beach areas.	Jackson	Yes	No	Yes	No	Yes	Yes		No	No		0	0	
	Seafood	1811	4/17/2014	Pascagoula Beach Blvd. Bulkhead Improvements and Public Access	Pascagoula Beach Blvd. Bulkhead improvement project. The project in design would improve the walls to be able to withstand the additional load of the new seawall protection project and prevent the erosion of the beach sand by water overtopping the wall during normal tide and weather conditions. A waler and tie back rods with a dead man anchorage system is being designed to be added to the wall. This will also allow fishermen to use the wall as a point to fish and public access. These two areas are the outfalls for two major watersheds.	Jackson	Yes	No	Yes	No	No	Yes	100	No	No		424940	0	
	Seafood	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 WO 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	No	No	No	No	Yes		Yes	Yes		5000000	0	
	Seafood	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	No	Yes	Yes		Yes	Yes		8000000	0	
	Seafood	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	No	No	No	Yes	Yes	100	Yes	Yes		6	0	
	Seafood	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 shiftâ€ 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	No	No	No	No	No		No	Yes		2923716	0	
	Seafood	1839	5/14/2014	Modernization of GCRL'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 Director'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	No	No	No	Yes	Yes	100	Yes	Yes		1.92	0	
	Seafood	1840	5/14/2014	Redesign of GCRL Halstead Campus entrance, vehicular routes, and boat access	GCRL'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 GCRL'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	No	No	No	Yes	Yes	100	Yes	Yes		735000	0	

	Seafood	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 Mississippi'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	No	No	No	Yes	Yes	10	Yes	Yes		5.5	0	
	Seafood	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	No	Yes	No	Yes	50	Yes	Yes		2	0	
	Seafood	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 state'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	No	No	No	Yes	Yes	40	Yes	Yes		30000000	0	
	Seafood	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	No	No	No	Yes	No		Yes	Yes		50000000	0	
	Seafood	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	No	No	No	Yes	Yes	15	Yes	Yes		30000000	0	

	Seafood	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	No	No		Yes	Yes		10000000	0	
	Seafood	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 states' resources agencies and expand the capacity of Mississippi'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. â€¦	Jackson	Yes	No	No	No	Yes	No		No	Yes		3641598	0	
	Seafood	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	No	No	No	No	No		No	Yes		1200000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1680000	0	
	Seafood	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	No	No	No	Yes	Yes	50	No	Yes		7250000	0	
	Seafood	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 State's natural resources and thereby promote enhanced seafood harvest and production, expanded recreational fishing activities, and associated tourism.	Jackson	Yes	No	No	No	Yes	No		No	Yes		2150000	0	

	Seafood	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	No	No		Yes	Yes		400000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		3000000	0	
	Seafood	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 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	No	No	No	Yes	No		No	Yes		1125000	0	
	Seafood	2029	11/9/2011	Restoration of Crab Fishing	Part 1 - Derelict Removal Program: Expanded cooperative effort with crab fishermen to remove derelict crab traps (resulting from oil spill and associated fisheries closures and storms) during closed seasons for directed trap cleanup. An annual closed season for crab traps occurs during which time derelict traps may be removed and recycled. Due to storms and man-made events, inadvertent cropping of float lines by propellers, and theft, an estimated 20% of active crab traps can become lost in the waters of the Mississippi Sound, creating navigational hazards and affecting marine resources such as the country?s only estuarine turtle, the Diamondback terrapin. Resident licensed crab fishermen can continue to be enlisted to assist in the cleanup of derelict traps. Time to Complete: 6 months Part 2 - Crab Trap TED (Turtle Excluder Device) Program: Essential terrapin habitat in Mississippi marshes is expected to be damaged as a result of the oil spill. Terrapins can become inadvertently caught in crab traps. A grass-roots cooperative effort between crab fishery participants and the MDMR could be expanded. The MDMR is assisting in the installation of turtle excluder devices (TEDs) in crab traps of volunteer commercial and recreational crab license holders at no cost to fishermen to help deter incidental catch. Crab fishery participants would also be enlisted in the monitoring of terrapin populations through cooperative research projects. Time to Complete: several years Costs depend on extent of program and degree to which volunteers are used for the trap removal.	Jackson	Yes	No	No	No	Yes	No		No	No	Yes	500000	0	
	Seafood	2039	8/1/2011	Environmentally Sustainable Working Waterfronts	This project consists of financial assistance to local seafood industry entities, affected by the Deepwater Horizon event, who participate in the development of environmentally sustainable working waterfronts projects through a variety of methods such as the following: Environmental planning, design, engineering, and impact statements; legal activities; public facilities upgrades or repairs such as water and sewer services, access roadways, parking and boat ramp facilities; dredging and/or cleaning of harbors and expanded commercial waterfront sites; repair and or construction of piers, jetties (breakwaters), and other improvements deemed necessary for both short term and long term success of environmentally sustainable working waterfront projects. The proposed project would provide a basic organization for recovering seafood industry operations, making funding opportunities available to qualified applicants for the establishment of support facilities to offload and sell Gulf products directly into a public market. The intent is to consolidate, where practical, harvesting, wholesale, and retail sales and processing in safe accessible locations, to achieve a more efficient operation that will benefit all stakeholders including the harvesters, the consumers, the processors and ultimately Mississippi’s marine environment.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	Yes		No	No	Yes	4000000	0	
	Seafood	2061	7/25/2011	Rehabilitation of Marine Fish Stocks	This project consists of restocking of important species of marine organisms along the Gulf Coast of Mississippi. Major marine ecosystems have been impacted and interrupted by the Deepwater Horizon event. Potential species for restocking (e.g., mullet, crab, red drum, and others as appropriate) would be integral parts of the marine ecosystems.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No	Yes	10000000	0	
	Seafood	2070	9/7/2011	Blue Crab Trap Removal	Crab traps are a significant problem in the Gulf of Mexico, having negative impacts on habitat and species. Derelict gear such as blue crab traps can cause a number of problems since throughout the Gulf of Mexico, more than 250,000 traps are thought to be added to the derelict population each year (Guillory 2001). The most significant is that they continue to catch and kill a variety of species, in a process called ghost fishing. Traps can also damage habitat, interact with threatened and protected species, and introduce debris into the food web. They also hinder commercial operations such as shrimp fishing and can result in damage to boats and injuries to people. Derelict gear can persist for decades once it is lost. These traps can be physically removed during winter months due to the shallow water depths at that time of year. This is a "shovel-ready?" project that would involve both state partners as well as local fishermen who would be contracted to conduct the removal. Based on estimated annual trap losses, including increased loss rates due to hurricanes and storms, it is estimated that this project could retrieve 500,000 derelict crab pots if fully funded. States have derelict trap programs that are habitually compromised by inconsistent budgets and participation rates. There are no NEPA concerns, with the only legal requirement being coordination with State agencies for short-term closures to facilitate removal activities. Removal will positively impact species by minimizing bycatch, including more than 20 species of fish and 6 species of invertebrates. The number of derelict traps in the Gulf of Mexico is currently unknown. There are, however, some annual estimates of trap disposal and overall trap loss; the latter also includes trap loss due to theft. Estimates of annual trap loss on a percentage basis for each Gulf state range widely: 30%-50% in Florida; 20%-50% in Alabama; 20%-30% in Mississippi; and up to 100% in Louisiana (Guillory 2001). Rolling fishery closures, coordinated closely with the most appropriate agency in each state, will allow for the physical collection of derelict or lost blue crab traps. States independently manage their own existing trap removal efforts, and this restoration project will have strong education and outreach. Traps will be removed from the coastal environment, and recycled to avoid waste contribution to landfills. Local fishermen and personnel will be consulted to determine the regions most in need of cleanup.	Gulf of Mexico	Yes	No	No	No	Yes	No		No	No	Yes	10000000	0	
	Seafood	2074	7/14/2014	Oyster Reef Structural Complexity	Summary attached.	Hancock, Harrison	Yes	Yes	Yes	No	Yes	No		Yes	Yes		438035	0	

	Seafood	2085	7/30/2014	MS Habitat Characterization Restoration Network (MSHCRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSSSIPPI 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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and 8. Synthesis and Management Products	Harrison, Jackson, Hancock, Mobile, St. Tammany	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		19000000	0	
	Seafood	2086	7/30/2014	MS Indicators of Stress Restoration Network (MSISRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSSSIPPI 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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and 8. Synthesis and Management Products	Hancock, St. Tammany, Mobile, Jackson, Harrison	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		7000000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes		Yes	Yes		1640000	0	
	Seafood	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 state'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	No	Yes	Yes	Yes	Yes	20	Yes	Yes		12000000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	20	Yes	Yes		20000000	0	
	Seafood	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	25	No	Yes		500000	0	

	Seafood	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 world'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	No	Yes	Yes	Yes	28	Yes	No		132000000	0	
	Seafood	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 world'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 species' diets, is in short supply given that it is derived from the world's oceans. Thus, to support continued aquaculture expansion, a new source of protein for aquafeeds that is not derived from the world'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 GA'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 State's abundant natural resources, including warm weather, sunshine, water, economically priced land, CO2 availability, agriculture base, and marine base; (5) Incorporation of CO2 via CO2 capture from power plant exhaust	Jackson,Harrison	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		12000000	0	
	Seafood	2166	11/7/2014	â€œOyster Watchâ€ New Approach to Monitor the Health of Critical Habitats and Food Resources along the Coastal Gulf of Mexico	Oysters are a crucial constituent of the northern Gulf of Mexico, and the Mississippi Sound, communities that represent an important commercial fishery species, as well as biological sinks of anthropogenic contaminants due to their significant filter feeding. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) to GoM coastal habitats have resulted in significant damage and loss of these critical ecosystems. Thus, monitoring water quality in these important ecosystems along the Mississippi coastline is crucial for residents and stakeholders. Using our expertise in UM's Environmental Toxicology Research Program, we propose to develop an environmental monitoring program along the MS coastline based on the succesful â€œmussel watchâ€ program of the east and west coasts of the USA, in which PI Slattery was involved. However, our approach will focus on the commercially and ecologically important oysters of the GoM coastline. Specifically, at sites of interest we will â€œcageâ€ hatchery oysters throughout a habitat of interest and recover replicate individuals (n=10) over time (i.e., monthly) to examine tissues for specific contaminants: 1) fecal coliforms levels, 2) PAH concentrations, 3) heavy metals, and 4) the presence of other important anthropogenic contaminats (e.g., endocrine disruptors). In addition, we will monitor the health of the oysters through changes in biomass and biochemical parameters indicative of stress (i.e., proteins, carbohydrate, and lipid), as well as, changes in specific stress proteins from the oyster proteome. The data will be analyzed using appropriate time series statistics, as well as proteomic 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 coastal habitats, it is possible that regional resource managers may wish to focus on specific sites and the data from this 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. University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	No	No	No	No	No		No	No		284312	0	
	Seafood	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 Eason, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	No	Yes	No	Yes	No		No	Yes		294392	0	
	Seafood	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 UM'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 Eason, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	No	Yes	No	Yes	No		No	Yes		287192	0	
	Seafood	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 UM'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 Eassom, Dierks, and Slattery, respectively). University of Mississippi: Marc Slattery, Deborah Gochfeld, John Rimoldi & Kristine Willett		Yes	No	Yes	No	Yes	No		No	Yes		287192	0	

	Seafood	2197	11/13/2014	The impact of Louisiana restoration projects on the Mississippi Sound, and Estuary	Coastal Louisiana has experienced substantial wetland loss since the construction of Mississippi River levees in the late 1800s. This land loss is largely a result of marsh edge erosion and submergence of interior wetlands, combined with smaller contributions from direct land removal for canals, construction purposes, etc. One cause is the elimination of spring over-bank flooding which delivers sediment to the marshes. Other factors include: 1) a reduced sediment load in the Mississippi River; 2) landscape and hydrology alternations from man-made canals; 3) a high rate of regional subsidence due to sediment compaction, tectonic subsidence, subsurface withdrawal associated with oil/gas/groundwater extraction, and eustatic sea level rise; 4) wave and tidal erosion, which accelerate in importance as water bodies become larger; and 5) tropical cyclone events. In response, Louisiana has developed a 50-year Master Plan which includes a mix of sediment diversions to build new deltas, removing existing barriers on Mississippi River tributaries such as the Bayou Lamoque floodgate, sediment piping and dredging to recreate marshland, and levees/floodgates to protect urban areas from storm surge. This Master Plan will be funded through a variety of sources, including different Restore Act avenues. However, the impact on Mississippi has generally not been considered. We propose a monitoring and surge modeling program to assess these impacts. Freshwater flow from diversions could affect Mississippi's seafood industry and also alter the Mississippi Sound ecosystem. The high-nutrient content of Mississippi River water is known to create hypoxic zones in the Gulf of Mexico. In addition, these nutrients may also be impacting wetland root systems in organic soils, making them vulnerable to storm surge as suggested by the high-erosion rate near the Caernarvon diversion. Deliverables include: 1) salinity and water quality monitoring with weekly boating surveys; 2) ocean modeling sensitivity studies of diversion outflows and floodgate removals; 3) sensitivity modeling studies of storm surge from floodgates in the Rigolets and Chef Pass on Mississippi, which is part of the Master Plan.	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	Yes		No	No		500000	500000	
	Seafood	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	78	Yes	Yes		25775000	0	
	Seafood	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 SBA'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. MSET'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	No	No	No		No	Yes		70000	0	
	Seafood	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 1950'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	No	Yes	No	Yes	Yes	15	Yes	Yes		340380	0	
	Seafood	5379	7/13/2015	East Mississippi Artificial and Oyster Reef Expansion and Enhancement	Anglers and conservation organizations working with the TRCP to identify projects to help restore and sustain fisheries along Mississippi''s coast stated areas in eastern Mississippi are lacking in artificial reefs and the natural reefs in the area have been diminished by decades of oyster harvest. Areas in Pacagoula Bay and adjacent waters suitable for oyster production after placement of reefing materials would have to be identified. Placement of 30 acres in all of reefing materials including limestone, crushed concrete and recycled oyster shells would follow the identification of suitable reefing areas. Additional funding should be set aside for maintenance and monitoring of reefs over the next two decades.		Yes	No	Yes	No	Yes	No		Yes	No		6	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		1	0	
	Seafood	5381	7/13/2015	Offshore Artificial Reef Creation, Monitoring and Rehabilitation	Mississippi Recreational fishing groups have been successful in securing materials suitable for construction of productive reefs that can increase fisheries habitat as well as access for anglers. Funds have historically been unavailable for monitoring and maintenance of existing reefs and for deployment of new reef materials. The offshore artificial reef creation monitoring and rehabilitation program would provide the funds needed to monitor and enhance existing reefs as well as identify additional locations for reef construction in areas most suitable for reef habitat and where fisheries production can be maximized.		Yes	No	Yes	No	Yes	No		Yes	No		25	0	
	Seafood	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-O'Keefe Museum of Art, the Schooner Pier Complex, the proposed Tricentennial Park, Harrah'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. The regional economy will benefit through a more successful charter fishing industry that will result from consolidating the boats into a more visible, attractive, conveniently-accessed location. ADA-compliant public improvements will benefit the seven new piers. Families with children in strollers and those with physical disabilities	Harrison	Yes	Yes	Yes	No	No	Yes	80	Yes	Yes		6000000	1000000	

	Seafood	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 90 Bridge 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 nesting and bird species. In addition, low impact all-weather educational signage will expand opportunities to learn about habitat supported by	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	80	Yes	Yes		35000000	0	
	Seafood	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	No	Yes	90	Yes	Yes		20000000	1000000	
	Seafood	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. The project addresses community goals identified in the Biloxi Comprehensive Plan to preserve public access to waterfront areas and improve pedestrian linkages between public amenities, especially	Harrison	Yes	No	Yes	No	Yes	Yes	60	No	Yes		500000	25000	
	Seafood	5403	9/11/2015	National BBQ and Seafood Competition	According to Linda Orrison, President of the National Barbecue Association and owner of Tee Shed Barbecue Restaurant, Mississippi has the most award-winning barbecue cookers int he Country and it is time to get the word out! A national competition at several venues and on several scales would include professional competition, amateur competition, SEC tailgating competition and a Seafood competition. Chefs and cooks from the Coast would compete against chefs from all over the country. And with connections with the Food Network, through Diners, Drive-ins and Dives, Mississippi Gulf Coast would be featured as a culinary destination! Venues would include The Shed, Great Lawn at Harrah's, MGM Stadium and others as it grows. Partners include Visit Mississippi Gulf Coast, area casinos and the Gulf Coast Tourism Foundation.	Harrison,Jackson	Yes	No	Yes	No	No	No		Yes	No		350000	200000	
	Seafood	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; USDA'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	No	Yes	No	Yes	30	Yes	Yes		13000000	0	
	Seafood	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 Mississippi'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 Mississippi'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 time â€• 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 Mississippi'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 and Jackson	Yes	Yes	Yes	Yes	No	No		Yes	No		12000000	5000000	

	Seafood	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 Governor'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. Mississippi'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. Need: Current harvest levels of oysters in the Mississippi Sound are declining. The State conducted a major planning effort to understand opportunities to slowly rejuvenate the oyster industry and	St Tammany	Yes	Yes	No	Yes	Yes	No		Yes	No		1000000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		1500000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		300000	0	
	Seafood	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	No	Yes	No	No	Yes		Yes	Yes		150000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		2850000	0	
	Seafood	5479	7/15/2016	Ways to augment oyster restoration with special products	To jumpstart oyster production off the coast of Mississippi by introducing seeded eyed larvae. These eyed larvae would come from Mississippi brood stock and produced at a Mississippi hatchery. The oyster larvae would be seeded on substrate and then placed in the water. The project would benefit the state of Mississippi by jump starting the number of oysters in beds being created. The young oysters being put on the substrate would spawn naturally and release their larvae into the beds being created.	Harrison,Hancock,Jackson	Yes	No	No	No	Yes	No		Yes	No		500	0	
	Seafood	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 Governor'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 State'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 State's commercial oyster fishery. To support these restoration objectives and achieve the State'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 Council's Hatchery Sub-Committee as the recommended hatchery to support Mississippi's oyster restoration because of its inland location out of harm's way from tropical storms and its ability to be operational in a short period of time.	Stone	Yes	Yes	Yes	Yes	Yes	Yes	77	Yes	Yes		13000000	0	
	Seafood	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 fishery'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 FIP' (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	No	No	Yes	No	No		Yes	Yes		391073	0	
	Seafood	5543	6/1/2017	Graveline Bayou Inlet Restoration	Graveline Bayou is relatively an undisturbed estuary in South Mississippi that supports salt and brackish marsh areas, along with several oyster beds throughout this estuarine bay and bayou. Furthermore, it supports an abundance of wildlife that makes this area an excellent location for fishing and birdwatching. As development materialized further inland, erosion has attributed to much loss of wetlands, other native vegetation along the shoreline and muddy/sand beach areas at the inlet. This narrowed inlet aided in a full self-scour of the channel alignment of the near shore waters and permitted ease of navigation. With the ongoing erosion of this inlet, water velocities are diminished and it is not able to adequately keep the navigational channel cleared of sediment, thus resulting a change of course, degrading coastal habitat and the need for more maintenance dredging to support marine use of waterway. The scope of this project would be restore the inlet to a prior year boundary that would be conducive to achieving similar ecological benefits once met prior to the inlet eroding. It would be the intent to establish a protective jetty around the designed boundary of both sides of the inlet to re-establish the original width. The jetty, which would be comprised of local material dredged from the near shore or inland areas of this Bayou. The jetty would incorporate native vegetation and, if necessary, a portion would be hardened to ensure stability of structure to withstand the regular impact from tidal flows and storm surge. Once the jetty was constructed and fortified, the interior area of the re-established boundary would be utilized as a Beneficial Use Disposal Site for placement of suitable dredge spoils for the purpose of replacing this eroded shoreline. Ideally, as continued maintenance dredge materializes within the area, said dredge spoils if deemed suitable could be placed within this Beneficial Use Site. Such action would yield lower dredge costs due to proximity of dredge disposal site and would permit government agencies more opportunities to dredge needed bayous for the purpose of flood minimization and enhanced recreational access. Upon completion of the proposed Beneficial Use Site, native vegetation would be planted to establish the ecological environment which once existed for expanding the native wildlife's habitat. The project benefit would be to restore this pristine estuary and bay back into a sound ecological state, re-establish the lost habitat area and to minimize the required maintenance dredging in the near shore waters which is vital to support the discharge of this watershed and navigable access.	Jackson	Yes	No	Yes	No	Yes	Yes		Yes	No		6000000	0	
	Seafood	5549	5/1/2017	Old St Martin Wastewater System Rehabilitation and Replacement Project	Construct a new 70,000 LF gravity sewer collection and 60,000 LF of cured in place gravity sewer system to replace old dilapidated sewer system of clay sewer pipe, brick manholes and unreliable pressurized residential grinder system (600 units). New collection system will be highly reliable system of modern materials of construction with fail-safe systems to prevent sanitary sewer overflows at old collection manholes and at unreliable residential grinder stations subjected to clogging and failure of numerous electrical components. Sanitary sewer overflows in the Old St Martin area can inject harmful bacteria and viruses that damage the coastal environment including oyster bed reefs, fish and other marine life. These bacteria and viruses can also find their way back into humans by ingestion. Fears of virus mutation in marine life and potential for transmission back to humans.	Jackson	Yes	Yes	Yes	No	Yes	Yes	100	Yes	No		10000000	1000000	
	Seafood	5749	10/12/2017	Understanding the oyster larva transportation system in the western Mississippi Sound	Please see attached Oyster restoration is dependent upon putting oysters in locations that 1) provide a suitable environment and 2) receive viable larvae from â€˜upstream reefs' and provide viable larvae to â€˜downstream reefs.' There is a notion that Bay St. Louis reefs provide larvae for much of Mississippi's harvestable reefs but this has yet to be confirmed. The objective of this project is to understand the larval transportation network in the western Mississippi Sound. This objective will be met through two tasks: 1) determining the locations of oyster reefs in Bay St. Louis and 2) modeling the larvae transportation system using a hydrodynamic model.		Yes	No	No	No	Yes	No		Yes	No		0	0	
	Seafood	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 Mississippi'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	No		Yes	Yes		1000000	50000	
	Seafood	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 Mississippi'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	No	No		Yes	Yes		1000000	50000	

	Seafood	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 Mississippi'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	No		Yes	Yes		10000000	0	
	Seafood	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		250000	0	
	Seafood	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	No	Yes	No		Yes	Yes		250000	0	
	Seafood	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 Governor'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	No	Yes	Yes		Yes	Yes		250000	0	
	Seafood	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	No	No	No	Yes	Yes		Yes	Yes		2000000	0	
	Seafood	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, 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. 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 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	Yes	No	Yes	No	Yes		Yes	No		2400000	240000	
	Seafood	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	No	No	No	No	No		Yes	Yes		300000	0	
	Seafood	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	No	No	Yes	Yes	Yes	17	No	Yes		290000	0	
	Seafood	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. ASFA proposes to pick up where the good work of the 2002 Seafood Marketing amendment, GoCoast 2020 and the RESTORE act efforts have left off, taking a leadership role rebuilding efforts to market	Harrison,Jackson	Yes	Yes	No	Yes	No	Yes		Yes	No		$ 8,400,000.00	$8,400,000.00	
New	Seafood	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	Yes	No	Yes	75	Yes	Yes		2000000	0	

PROJECT CATEGORIZED INCORRECTLY IN PORTAL (ORANGE CELLS)

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	SEAFOOD	SMALL BUSINESS	TOURISM	WORKFORCEDEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCHANDEDUCATION	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Seafood	1286	12/20/2013	Restore and Re-populate Addressing Potential Impacts of the Deepwater Horizon Oil Spill to Fishes in Coastal Mississippi Rivers	Coastal streams in Mississippi flow through many miles of urban and suburban areas, longleaf pine forests, agricultural lands, ancient bottomland hardwood forests and cypress swamps and empty into a network of marshes and lakes and the Mississippi Sound. They are home to many species of wildlife, including migratory birds that winter in South America as well as several threatened and endangered species of fish. Fish, such as Gulf Striped Bass, Morone saxatilis, travel coastal stream waters to the Gulf of Mexico and return to the rivers to spawn. These rivers provide vitally important spawning and post-spawning habitat for Striped Bass and other species. Freshwater fish, such as the Largemouth Bass, Micropterus salmoides, Spotted Bass, Micropterus punctulatus, (species of black bass)and several sunfish species, Lepomis spp., and crappie, Pomoxis spp, provide the driving force of the freshwater fishing activities of Gulf anglers. All of the coastal river systems are important and include the Pascagoula River watershed described as the last unimpeded system in the continental United States and the closest we have at least in the lower 48 states to a natural paradise by Dr. Bailey Thomson, University of Alabama; the lower Pearl River which serves as the 116-mile boundary between Mississippi and Louisiana; and, the Coastal Streams like the Jourdan, Wolf and Tchoutacabouffa Rivers and numerous bayous. Statement of Need The Gulf Oil Spill affected important estuaries and open waters that serve as habitats for fish throughout their life cycles. Gulf Striped Bass are a recreationally and economically important throughout the Coastal counties and this species occupies affected habitats. MDWFP proposes to repopulate Striped Bass populations and augment populations of black bass and sunfishes in these impacted river systems through the methods outlined below. Expansion of Turcotte Fish Hatchery, in Canton, will be necessary to provide advanced sized fingerlings for the coastal streams. An additional hatchery employee will be needed to address the increased workload. Methods --Repopulate Fish Populations of Conservation Concern -Determine relative abundance and age structure of Gulf Striped Bass populations in the Pearl, Pascagoula the Jourdan, Wolf and Tchoutacabouffa Rivers. -Improve fish production capacity at Turcotte Fish Hatchery near Canton, MS, for increased production of Gulf Striped Bass, black bass and selected sunfish. -Produce advanced fingerling black bass, and selected sunfish at to enhance populations of game fish in the coastal streams. Monitoring and Evaluation -Collect biological data on existing Gulf Striped Bass populations in coastal rivers. -Collect biological data on existing Largemouth Bass, Spotted Bass and sunfish populations in coastal rivers.	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	No		Yes	No		5500000	0	
	Seafood	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 City'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	No	No	Yes	10	Yes	Yes		3800000	250000	
	Seafood	1765	3/5/2014	East Jackson County Flood Control and Marine Habitat Enhancement	This project would add capacitance to the Escatawpa River watershed and remove encumbrances to sheet flow across the Grand Bay Savannah. This would be accomplished by construction of a flood control reservoir and/or alternately provide a means of flood water release by removing restrictions to flow created by I-10, Highway 90 and the railroad tracks south of Highway 90. Proposed project benefits: 1. Alleviate flooding in the Helena and Franklin Creek communities. 2. Establish sheet-flow across the Grand Bay Savannah to reduce bacteria levels in the eastern Mississippi sound allowing for reopening of the area's oyster beds. 3. Provide an alternate source of industrial water to Jackson County industries. 4. Provide recreational opportunities for area water enthusiasts and sportsmen.	Jackson	Yes	Yes	Yes	No	Yes	Yes	20	Yes	No		25000000	0	
	Seafood	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 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	No	Yes	No	Yes	No		No	Yes		9600000	0	
	Seafood	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	No	No	Yes	Yes	No		No	No		0	0	
	Seafood	1770	3/20/2014	Bayou Cassotte-Pt Aux Chenes Bay Watershed Management	This project will provide for hydrologic modeling, hydraulic improvements, coastal habitat restoration/enhancements, and flood reduction within the Bayou Cassotte-Pt. Chenes Bay Watershed. Detailed monitoring and modeling of the watersheds will be completed in an effort to reduce the downstream impacts of the watershed on Point Aux Chenes bay through stream restoration plans and habitat reconstruction designs. The watershed faces loss of wetlands, shoreline erosion, and sedimentation from increased land development. Stabilization of these bayous and stream segments will significantly reduce the future sediment loading into Point Aux Chenes Bay and Bayou Cassotte. Improvements to the highly impaired watershed are critical to ecological function of the region. The goal of this project is to develop a comprehensive watershed management plan as well as prioritize a list of significant restoration work.	Jackson	Yes	No	No	No	Yes	No		No	No		0	0	
	Seafood	1800	4/4/2014	A comprehensive approach for the restoration and recovery of essential prey items for Kemp's ridley sea turtles (Lepidochelys kempii) in the Mississippi Sound	Kemp'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 Kemp's ridleys, have stranded dead along the Mississippi coast raising important questions about regional ecosystem health. Additionally, over 300 immature Kemp'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 Kemp's ridleys. The purpose of this project is to facilitate the recovery of Kemp's ridley habitat by 1) monitoring the effects of recently established artificial and oyster reefs in the Mississippi Sound on Kemp's ridleys and essential prey items, and 2) establishing programs to enhance wild stocks of Kemp's ridley prey. These efforts will provide critical information for understanding the importance of reef habitats for developing Kemp's ridleys and their prey, will promote the restoration and recovery of Kemp'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 Kemp's ridleys. Further, ongoing research examining the value of artificial reefs for prey items of Kemp'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	No	No	Yes	Yes	Yes	60	No	Yes		18000000	0	

	Seafood	1813	4/25/2014	Buccaneer State Park Two-Tiered Restoration	Buccaneer State Park is in the Campbell Bayou-Bayou Caddy watershed (HUC 031700091401) west of the City of Waveland in Hancock County, MS and abuts multiple diverse coastal ecosystems and habitats, i.e. inland marshes, bayous, estuaries and shoreline/beaches. The Park also provides affordable public access, recreation and tourism opportunities on the Mississippi Sound shoreline to swim, crab and fish. The shorelines, estuaries and marshes adjacent to the Park were physically injured by oil from the Deepwater Horizon (DWH) Oil Spill. A two-tiered Project is proposed to restore and protect these coastal habitats by siting, designing, permitting and constructing approximately: 1) 1.9 miles of near-shore living shoreline, i.e. a low-crested submerged breakwater; and 2) 0.75 mile long by 100 yard deep high-profile, off-shore artificial reef. These features will complement and supplement three other proposed estuarine and upland restoration projects that encompass the majority of the Campbell Bayou-Bayou Caddy watershed: 1) Mississippi Department of Environmental Quality (MDEQ) Restoration of Buccaneer State Park Natural Resources Damage Assessment (NRDA) proposal, 2) Grand Bayou Ecological Restoration (Project -1767) and 3) Jackson Marsh, Grand Bayou and the Adjacent Gulf: Headwater Hydrologic Restoration (Project 1872). This Project is the marine component of a holistic watershed approach to restore a habitat corridor for coastal marine mammals, birds and fish between coastal, estuarine and upland ecosystems and provides multi-barrier protection to prevent residual oil from the DWH Oil Spill from reaching these restored habitats. MDEQ prioritized $2.6 million of NRDA Phase I early restoration fund to enhance Mississippi's 67 existing near-shore artificial reefs each of which is approximately three acres in size. These traditional near-shore reefs provide hard bottom foraging and shelter habitats for smaller encrusting organisms, e.g., juvenile shrimp, crab and oysters that live on the reef and in the sediment. Most recently, MDEQ selected the Hancock County Marsh Living Shoreline Project for NRDA Phase III early restoration funding. This $50,000,000 Project combines constructing a 5.9 living shoreline to protect and enhance the shoreline and building 46 acres of subtidal oyster reef and 46 acres of marsh to increase near-shore secondary productivity. This Project proposes creating two mutually supporting habitats that will be sited to extend Mississippi's artificial reef system west of Jailhouse Reef. The combination of an off-shore, high-profile (roughly 30 feet above high tide) artificial reef and a low-crested, submerged living shoreline will create a unique coastal habitat in Mississippi. This two-tiered approach will restore damaged marine habitats and natural resources and protect coastal, estuarine and upland habitats from residual impacts from the DWH Oil Spill. The living shoreline will restore injured near-shore habitats and enhance secondary natural resource productivity while the larger, high-profile reef will attract and concentrate larger recreational and commercial fish and restore and enhance damaged habitats for marine mammals and marine and coastal birds. Florida recently permitted a similar high-profile artificial reef system two miles off Henderson Beach State Park. The living shoreline will also be designed and sited to provide a final barrier to slow and treat run off, including stormwater runoff, from the entire Campbell Bayou-Bayou Caddy watershed before it enters the Mississippi Sound. MDEQ has a coastal water quality monitoring station immediately off shore of Buccaneer Park. This station can provide historical near-shore water quality data as the foundation of an expanded long-term monitoring effort to quantify and track the Projects secondary water quality benefits.	Hancock	Yes	No	Yes	No	Yes	No		No	No		8900000	0	
	Seafood	1822	5/13/2014	Design and construction of a replacement for the R/V Tommy Munro	This document addresses the need for a mid-sized (110-120 ft) research vessel to replace the aging R/V Tommy Munro. The 983â€² R/V Tommy Munro was built in 1981 and has served USM and other Gulf academic, state, and federal users faithfully since then. However, the vessel no longer meets the needs of the expanded marine program at USM. We expect present users including ongoing survey programs such as SEAMAP to be retained on a new vessel. However, we note the dearth of vessels in this size category in the Gulf of Mexico. Other vessels of this size (e.g., the 116â€² R/V Pelican built in 1985, the 115â€² R/V Weatherbird built in 1982) are of the same vintage and offer similar constraints for use in modern at-sea research programs. Thus, we anticipate that a new vessel would attract considerably increased usage if properly designed. Included in this wider range of research are programs requiring quiet technology, such as acoustics, dynamic positioning for ROV deployment and precise benthic sampling, modern speed and winch control for trawl gear testing, modern electronic capabilities including acoustic transmission for net sensors and conducting cable for overboard sampling gear, etc. The vessel would position USM as a leading vessel operator in the Gulf of Mexico and provide considerably expanded capability in support of many RESTORE programs. A replacement vessel should have the following characteristics: a. Length: 110-120 ft b. Draft: 3½±10 ft c. Quiet technology (e.g., electric drive, etc.) to support acoustic research d. Trawl winches and hydrographic winches below deck/above deck to provide maximum free deck space aft e. Dynamic positioning f. Moon pool g. Auto-trawl system h. Capable of mounting a full range of net sensors i. Dry and wet laboratories j. Berthing for minimally 10 scientists plus crew k. State-of-the-art internal (e.g., laboratory to wheelhouse) and external (e.g., vessel-wide satellite connectivity) communications l. Rigged stern for trawl deployment. Rigged port and starboard for overboard deployment of research gear (e.g. CTD/rosette, box core, plankton nets) m. Conducting cable on hydrographic winch n. Maximum fuel efficiency o. Competitive day rate p. Shore-based infrastructure to support expanded gear storage and mobilization demand 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? GCRL expects the vessel being used by a variety of RESTORE and non-RESTORE agencies, including the Southeast Area	Jackson	Yes	No	No	No	Yes	Yes	100	No	No		20	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		7500000	0	
	Seafood	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 NGO'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	No	No	No	Yes	No		No	Yes		2000000	0	
	Seafood	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€ 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€¨	Jackson	Yes	No	No	No	Yes	No		No	Yes		3739000	0	

	Seafood	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€¦	Jackson	Yes	No	No	No	Yes	Yes	30	No	Yes	monitorin	2055750	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		8000000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		1500000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		12000000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		150000	0	

	Seafood	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	No	No	No	Yes	No		No	Yes		1150000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		740500	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	40	Yes	Yes		1370500	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	80	Yes	Yes		9519500	0	
	Seafood	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 Coalition'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 State'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 L. Lanc Oldham (Co-PI)	All MS Counties	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		739478	0	
	Seafood	2050	7/25/2011	Restoration of Buccaneer State Park	his project consists of habitat enhancements including submerged aquatic vegetation (SAV) plantings. Historically, SAV beds of Ruppia maritima have been documented intermittently along the adjacent coastline. SAV beds are an important nursery for many commercially important species, such as blue crabs. Since the marine environment of the State Park can be impacted by freshwater from the opening of the Bonnet Carre spillway, it would be important to utilize a multiple habitat restoration approach for this area. Also, adjacent waters have some existing oyster reefs and sand borrow areas used for local beach nourishment projects. Therefore, oyster reefs could be re-established at the park.Oyster reefs could enhance the stability of the seabed, promoting additional SAV development shoreward of the reefs. Sand renourishment and construction of low profile artificial reefs would add further to habitat and fisheries enhancements.	Hancock	Yes	No	No	No	Yes	No		No	No	Yes	7000000	0	
	Seafood	2075	7/18/2014	MS Observing and Modeling Restoration Network (MSOMRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSSSIPPI 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 3Dreal time3Dcapability for this decision-making. The University of Southern Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and 8. Synthesis and Management Products	Hancock, Harrison, Jackson, St. Tammany, Mobile	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		47000000	0	

	Seafood	2076	7/23/2014	MS Living Marine Resources Restoration Network (MSLMRRN)	A COMPREHENSIVE AND INTEGRATED OBSERVATION, MONITORING, MAPPING, AND MODELING PLAN FOR MISSSSIPPI 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 Mississippi's Marine Science Department has taken the lead to develop a comprehensive and integrated observation, monitoring, mapping, and modeling plan for Mississippi'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, 7. Outreach, and 8. Synthesis and Management Products	Mobile, Hancock, St. Tammany, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	20	Yes	Yes		49000000	0	
	Seafood	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: -An ongoing 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	No	Yes	No	Yes	No		Yes	Yes		2337500	0	
	Seafood	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	No	Yes	No	Yes	Yes	15	Yes	Yes		1100000	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		1800000	0	
	Seafood	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 EPA'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 Seafoodsâ€. 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 the ratio of Hg naturally found in the sample. The spiked sediment is incubated and allowed to undergo methylation naturally, with the isotope essentially serving as a tracer. The amount of tracer		Yes	No	No	No	Yes	No		No	Yes		120000	0	

	Seafood	2167	11/7/2014	Biological Filtration: Using Sponges to Remediate Gulf of Mexico Coastal Contaminants	Coastal marine ecosystems are crucial environments of the Gulf of Mexico, and the Mississippi Sound, that include important commercial fishery species, as well as threatened and unique species. Recent natural and anthropogenic stressors (including multiple Category 3+ hurricanes, as well as the Deep Horizon oil spill) within these GoM ecosystems have resulted in significant damage and loss of these critical resources. Thus, the restoration of water quality along the Mississippi coastline is crucial for residents and stakeholders. We propose to deploy a system of biological filters around the periphery of important GoM habitats (e.g., seagrass beds) to clear contaminants from the water column and improve water quality. Specifically, we will attach marine sponges to multiple deployed cinder blocks, and divers will position these â€œupstreamâ€ of identified habitats and/or between point source discharges and the habitat in question. Marine sponges are important filter-feeders with pumping rates in excess of 3L per h, and many contain extensive symbiotic microbial populations that have important roles in biogeochemical cycling (e.g., nitrification processes). Research by PIs Slattery and Gochfeld has demonstrated significant clarification of particulate organic carbon (POC) and microbial metabolism of dangerous nitrogen species into biologically-useful nitrogen. Moreover, we can seed sponges with specific microbes that are known to clear PAHs and other toxic metabolites. We will position sufficient biological filters (i.e., cinder-blocks w/ sponges) to clear the water near habitats of interest, and through resources in UM's Environmental Toxicology Research Program [ETRP], we will monitor changes in the water quality post-deployment. 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. The budget provided represents the aforementioned remediation 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	No	Yes	No	Yes	Yes	30	No	No		311763	0	
	Seafood	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	No	Yes	Yes	Yes	No		No	Yes		391457	0	
	Seafood	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	No	No	Yes	Yes	Yes	100	No	Yes		400000	0	
	Seafood	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 Mississippi'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 can	Hancock, Harrison, Jackson	Yes	Yes	Yes	No	Yes	No		Yes	Yes		125000	0	
	Seafood	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€ of. 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 waters†listed as one of â€œthe main areas the seafood industry is focused on†(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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	

	Seafood	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 waters†listed as one of â€œthe main areas the seafood industry is focused on†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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	
	Seafood	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 waters†listed as one of â€œthe main areas the seafood industry is focused on†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	No	Yes	No	Yes	16.7	Yes	Yes		600000	0	
	Seafood	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 residents' quality of life†which is listed under Additional Requirements in the GoCoast 2020 Final Report (p. 10). The quality of life attributes is also myself noted in detail on pp. 15-16 of the GoCoast 2020 Final Report.	Harrison	Yes	Yes	Yes	Yes	No	No		Yes	Yes		9500000	0	
	Seafood	2190	11/12/2014	Purchase and Sea Trials of a 4000-m Capable Remotely Operated Vehicle for Marine Science Discovery and Experimentation			Yes	No	No	Yes	Yes	Yes	100	Yes	Yes		5000000	0	Equipment development and purchase
					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 areas†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.														
	Seafood	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 1970'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 conditions during the ship island	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	No		Yes	Yes		1480192	0	
	Seafood	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 communities†they work hard and get the job done.	Harrison	Yes	No	Yes	Yes	Yes	Yes		Yes	Yes		410000	360000	

	Seafood	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 Mississippi'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 Agriculture's Natural Resources Conservation Service (NRCS), Jackson State University (JSU) and the Pickering Firm, Inc. (PFI) to address the Gulf Council's 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 Council'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 program's geographic location and size encompassing the St. Louis Bay and tributaries was selected to meet the Council's four priority criteria. Specifically, this holistic approach is easily scalable to address all the Council's goals and objectives and transferable to be replicated throughout the Gulf region and; If it will significantly and measurably contribute to restoring and protecting the Gulf Coast Region's natural resources, ecosystems, fisheries, marine and wildlife by concentrating and coordinating individual projects; If it is large enough to substantially contribute to restoring and protecting the Gulf Coast ecosystem's natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands yet small enough quantity specific improvements; If it covers the St. Louis Bay and tributaries which Mississippi'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 If it provides 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 education expertise. The process is patterned after tested and proven watershed management approached and would start with extensive outreach and local engagement to create and organize a St. Louis Bay and Tributaries Partnership Council. The next steps would be to work with the Council, Mississippi Department of Environmental Quality (MDEQ) and Mississippi Department of Marine	Hancock,Stone,Pearl River,Forrest,Harrison	Yes	No	Yes	No	Yes	Yes	20	Yes	Yes		14968000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		3500000	0	
	Seafood	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 Gulf'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 This proposal is developed by the Mississippi State University Center for Urban Rural Interface Studies <http://curis.msstate.edu/>. The successful implementation of the proposed project will involve	Hancock,Jackson,Pearl River,Forrest,Perry,George,Stone,St Tammany,Mobile,Washington	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes		467187	0	
	Seafood	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	No	Yes	No	Yes	No		Yes	Yes		900000	0	
	Seafood	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 Mississippi'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 Mississippi'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	No	Yes	No	Yes	No		Yes	Yes		900000	0	

	Seafood	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 Council'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 Council'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. This proposal component, with finite deliverables, builds upon Objective 1. Implementation of the RESTORE Council's Comprehensive Plan, with its overarching goals, is being supported by dozens of	Hancock, Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes		0	0	
	Seafood	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 HUD'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 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 Science & Engineering	Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	Yes		Yes	Yes		90000	0	
	Seafood	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 Cruisin' 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 GoCoast's 8 key areas of focus: eco-restoration, economic development, seafood, infrastructure, tourism, workforce development, small business, research and education. The CoBGC and the CCA will	Harrison	Yes	Yes	Yes	Yes	No	Yes	86	Yes	Yes		35000000	0	
	Seafood	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, biochar 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. Sorbent's absorption capacity and ultimate fate are a major cost factor for this technology. Absorption capacity, in turn, depends mainly on the sorbent'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°C~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, SEE's low-temperature activation methods remove significant amount of exchangeable mineral components, which further enhance the hydrophobicity of the biochars' 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. 4.SEE group will then test the oil-absorption capacity of the raw and activated biochar and compare those of the synthetic carbon in the market. 5.We will conduct techno-economic analysis of the proposed biochar absorption process and compare it with that of the current technology		Yes	No	Yes	Yes	Yes	No		Yes	Yes		300000	0	develope product and create industry in MS
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		570000	20000	

	Seafood	4302	1/16/2015	Oil Spill Aftermath Assessment 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. 7. Recording interview with audio recorded device if participants allow permission.		Yes	No	No	No	No	No		No	Yes		90700	0	Community interviews
	Seafood	4306	1/26/2015	Escatawpa River Hydrologic Restoration Study	The health and productivity of the Northern Gulf of Mexico's estuarine and coastal ecosystems and habitats is tied to salinity levels and their inland extent. Salinity levels are inexorably linked to the timing, duration, volume and location of freshwater inflows from innumerable rivers, streams and bayous. Mississippi's main coastal rivers such as the Pascagoula and Escatawpa collect and transport large volumes of rainfall, sediment and nutrients from a fairly flat landscape into bays or estuaries and on into the Mississippi Sound where fresh, estuarine and Gulf waters intermingle. As they near the coastal interface, rivers often meander through flat, marshy landscapes with numerous secondary and abandoned channels, oxbows and large areas of off-channel wetlands. The coastal savannahs and estuarine marshes of Mississippis Grand Bay represent the historic deltaic environments the Pascagoula and Escatawpa Rivers formed when the Escatawpa River flowed directly into the Mississippi Sound near the border of Mississippi and Alabama in east Jackson County, Mississippi. At some point before 1950, the Escatawpa River channel shifted so that it flowed directly into the Pascagoula River and not Grand Bay. The Pascagoula River outlet also shifted westward which severely limited the inflow of freshwater, nutrients, and sediments into Grand Bay. The construction of bridges for railroads and highways also altered historic sheet flow and surface water flows and contributed to the loss of historic freshwater flows into Grand Bay. Many of the bayous flowing into Grand Bay have also been modified by development and conversion for commercial, residential, industrial, or recreational purposes. Much of the Grand Bay's unique ecosystem is protected and managed as public lands including a National Estuarine Research Reserve (NERR) (18,000 acres) and a National Wildlife Refuge (NWR) (32,000 acres when complete). The Mississippi Department of Marine Resources also has two Gulf Environmental Management Stes (GEMS) in the Grand Bay watershed 1) the 2,826-acre Escatawpa River Marsh Preserve and 2) the 26,900-acre Grand Bay Savanna Preserve. Most plants and animals found in these estuarine ecosystems can only tolerate a specific salinity range. Generally, animals can quickly move or migrate to find water with the appropriate salinity. However, plants cannot adapt as quickly and will die and be replaced with more resilient plants if there are long-term salinity changes. Precipitation, or the lack of precipitation, and its delivery into the estuaries is the primary factor influencing salinity levels. Similarly, habitats change in response to salinity levels. Moving upstream or inland from the coast the tidal influence wanes allowing tidal freshwater marshes and swamps to form. Water levels in these transitional habitats vary from tidal fluctuation and from freshwater inflow. The habitats may be dry for prolonged periods of time during droughts and totally submerged for weeks at a time during floods. Accordingly, alterations in the location and volume of freshwater inflow can severely disrupt Grand Bay's unique coastal ecosystems and habitats. In addition, Global Climate Change/Variation projections predict even less freshwater inflow because of less precipitation and higher temperatures with increased evapotranspiration throughout Grand Bay's watershed. A diversion project to return a portion of the Escatawpa River's flow to Grand Bay may be critical to ensure Grand Bay's ability to provide long-term ecosystem services. Still, any freshwater diversion may deliver excess sediment and nutrients into Grand Bay which could cause algal blooms, lower light attenuation, and eutrophication. The Mississippi Coastal Improvements Program (2009) proposed developing a â€œa refined hydrodynamic model for the area, inputting biological, water quality, and physical data into the model to evaluate a variety of freshwater diversion scenarios.â€ The modeling effort needs to be conducted in conjunction with interviews and public workshops to gather community information. If feasible, a freshwater diversion project may serve to enhance the areas wildlife resources. The need for freshwater diversion at the Grand Bay savannahs and marshes would help restore the predominant wet pine savannah habitat.	Jackson	Yes	No	Yes	No	Yes	No		No	No		3500000	0	
	Seafood	4316	2/19/2015	Bay St Louis stream restoration, canal dredging project and Removal of Derelict Boat Houses and Piers Project	Bay St louis has over 27 miles of waterways inside the city limits. The waterways include natural streams and a system of canals that connect to the Jordan River and Bayou Lacroix. The entire system is in great need of maintenance dredging and debris removal to cure the residual impacts of sediment and trash accumulated from decades of hurricane and flood deposits. Dredging the entire system would have multiple benefits that would include but not be limited to improving: water quality, flood prevention with better drainage/runoff, navigation, recreational safety and useful byproduct(sediment removed could serve as marsh replenishment material). BSL proposes to remove the numerous derelict boat houses and damaged piers/pilings from along the water front on Beach Blvd. These structures pose a navigational danger to boaters, fisherman and recreationalists which frequent the water front.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		15000000	0	
	Seafood	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	0	0	
	Seafood	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 appropriate	Yes	No	Yes	No	Yes	No		Yes	Yes		20000000	20000000	
	Seafood	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€ 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	25	Yes	Yes		10	0	
	Seafood	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 direct access to East and West Channels. Project activities include expanding the harbor east to provide approximately 60 new slips and improve harbor accessibility; constructing new public amenities	Harrison	Yes	Yes	Yes	No	Yes	Yes	80	Yes	Yes		35000000	0	
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	Land Acquisition
	Seafood	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		18000000	0	

	Seafood	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	No	No	No	Yes	Yes	20	No	Yes		425000	0	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		250000	0	
	Seafood	5492	6/30/2016	Pass Christian Harbor Elevated Walkway	The proposed project is to construct an elevated pedestrian walkway over U.S. Highway 90 in Pass Christian, MS. The walkway would connect the downtown business district to the Pass Christian Harbor. This project would not only enhance economic development in the City but would also promote new development at the harbor. The walkway would allow for safe pedestrian access from the harbor to the downtown area, which would be used by local commercial and recreational fishermen as well as tourists and transient boaters. The City of Pass Christian recently invested in the construction of a Day Pier to allow transient boaters a convenient place to dock their boat while not having to rent slip space. The Elevated Walkway would attract more local attention to both the harbor and the adjacent businesses by having unobstructed safe access across a major vehicular thoroughfare.	Harrison	Yes	Yes	Yes	No	No	Yes		Yes	No		2400000	0	
	Seafood	5496	7/12/2016	Establish and Nationally Promote Mississippi Tourism Packages	The Wilem Group (TWG) is currently working with MDA to promote tourism within the State via its two television shows airing to over 30 million households in most major cities. Gulf South Outdoors highlights Mississippi outdoor activities ranging from fishing to hunting, to kayaking and even eco-tourism. The company's second show, Hook It & Cook It, focuses on safe seafood featuring seafood caught in state waters, cooked, and even eaten on the show. For example, after watching a show featuring one of the Mississippi Coast's fishing guides, viewers will be able to book a package including lodging and meals to fish with the very guide they just watched on the show. Funding from this project, will enable future shows to focus on a wider variety of activities such as fresh water/offshore fishing, hunting, kayaking, hiking, eco-tourism and could even highlight music, art, and dining throughout the state. In each case, the viewer will be afforded the opportunity to book a package to enjoy the same activity they just watched or the same meal that they watched being prepared providing a direct tourism benefit with metrics which can be measured. Agreements are already in place to handle the backside of processing reservations and accepting payment from tourists throughout the country. Activity-based video vignettes will be produced that are specific to tourism packages. Some will be incorporated into shows while all will be used in Internet promotions. The show casts Mississippi in a favorable light helping viewers across the nation to learn what we have to offer while combating negative stereotypes. Cost for this project is $138,000 for one year (with the option to continue funding for up to four additional years) and would be used to: â€¢ Create additional video vignettes focusing on specific tourism activities for use on the company's two television shows, as well as in the company's and state's Internet marketing, and â€¢ Promote tourism packages by driving additional viewers to watch the shows, learn about what the state has to offer, select from a variety of all-inclusive packages, and put â€œheads in beds†with metrics which can be tracked. Tourism package ads will be run on the actual show. Also, ads promoting the show itself as well as the packages will be posted in a variety of places including Facebook sponsored posts, YouTube pre-roll, and targeted Internet ads.		Yes	No	Yes	No	No	No		No	No		138000	60000	
	Seafood	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	No	Yes	Yes	Yes	Yes	50	Yes	No		500000	0	
	Seafood	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 Biloxi's seafood industry. This project complements the City of Biloxi'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 Biloxi's rich cultural history as the former â€œSeafood Capital of the World†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	100	Yes	Yes		25000000	0	
	Seafood	5509	9/8/2016	Sanitary Sewer System Rehabilitation Project	Need for Project: Significantly reduce I/I; consolidate facilities, reduce operating costs, reduce sanitary sewer overflows. Scope of Work: Installation of 40,000 LF of new 12" and smaller SDR 26 PVC gravity sewer system and abandonment of 40,000 LF of existing 50+ yr old clay pipe sewer system; installation of 25,000 LF of CIPP lining in 12" and smaller 50+ yr old clay and concrete pipe sewer system; 40,000 LF of 4" sanitary sewer service lines to replace existing 50+ yr old bituminous wood fibre pipes and clay pipes; 4000 LF of new 12" force main pipe to replace 50+ year old pipe; 150 new gravity sewer manholes; interior lining of 100 existing gravity sewer manholes, 200 point repairs of existing gravity sewer system, consolidation of pump facilities with construction of a single new sewer lift station to allow abandonment of six existing small sewer lift stations. Project Benefits: Significantly reducing I/I Reduce operating cost by reducing electrical costs associated with pumping, reducing wastewater treatment costs, reducing spot repair costs, reducing repairs associated with root intrusion, reduce root intrusion chemical costs, reduce maintenance cost by reducing #'s of pump stations, reduce sanitary sewer overflows that harm the sensitive coastal environment and damage the ecosystem, reduce raw sewage dumps to drainageways that discharge to coastal beach areas and cause health hazards for residents and vacationers enjoying recreational activities along the coast line, reduce raw sewage dumps to the streams and discharge to Gulf waters damaging fishing and shellfish industry.	Jackson County	Yes	No	Yes	No	Yes	Yes	100	Yes	No		15745027	1574502.7	
	Seafood	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	No	Yes	No	No	Yes	10	Yes	Yes		1500000	0	
	Seafood	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 City's bayous and the Mississippi Sound.	Jackson	Yes	Yes	Yes	Yes	No	Yes	95	Yes	No		10000000	0	

	Seafood	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 south'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 College'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, visitor'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	50	Yes	Yes		9000000	0	
	Seafood	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 RFQ'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	Yes	Yes	Yes	No	Yes		Yes	No		100000	0	
	Seafood	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	No	No	Yes	Yes		Yes	Yes		750000	50000	
	Seafood	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 fishermen' 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: 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	No	No	No	Yes	No		No	Yes		16	0	
	Seafood	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	No	Yes	Yes	Yes	Yes		Yes	No		25	431000	
	Seafood	5859	11/5/2018	Mississippi Gulf Coast Near Shore Water Quality Project	This Storm Water Filtration Project is proposed to address the ongoing poor near shore water quality issues which continuously plague the Mississippi Gulf Coast. Each year, segments of our coastline have "Water Contact Advisories" posted as a result of elevated bacteria levels found within the near shore waters. These Advisories are to discourage individuals from accessing these areas and being a tourist destination, this overall perception has a negative lasting impact. Although there are several aspects of addressing this problem underway, such as upgrading sanitary sewer systems and implementing Eco-Friendly "Green" solutions, they do not fully address all of the bacteria sources contributing to these periods of elevated bacteria levels within our near shore waters. This Storm Water Filtration System technology is designed to capture the storm water run off during rain events, force through a treatment process to remove sediment and bacteria, retain the contaminants for disposal within the sanitary sewer system and return the treated storm water back into the discharging outfall. Ideally, the treatment facility should be positioned near the discharge outfall location or as close as geographically permitted to maximize the area of watershed treated. However, this technology can be placed in strategic locations based on existing conditions to treat various segments throughout a watershed. This flexibility of an adaptable design specific to existing conditions, makes for an ideal approach to treat storm water run off for clean acceptable near shore water quality. A more detailed presentation is attached with this project information.	Harrison	Yes	No	Yes	No	Yes	Yes	95	Yes	No		12000000	0	
	Seafood	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	72%	Yes	Yes		$ 3,250,000.00	$ -	

	Seafood	S877	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	No	Yes	No		Yes	Yes		$ -	$ -	Land Acquisition
New	Seafood	S877	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	No	Yes	No		Yes	Yes		0	0	Land Acquisition
	Seafood	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	No	No	No	Yes	No		No	Yes		0	0	
	Seafood	10	10/18/2013	Offshore Reef Restoration, Establishment and Monitoring	MGFB has been organized since 1969. We are a nonprofit group run entirely by volunteers. Our only goal is to build artificial reefs off the coast of Mississippi. In addition we moniter these reefs monthly to assess their viability and productivity as well as take periodic water samples to gauge Dissolved Oxygen content and contaminants. We continuously publish these findings on our website (MGFB.org)and have done so for 12 years. In addition we include numerous High Resolution photographs and video. We are the only organization to do so, including the Mississippi Department of Marine Resources. MGFB is the permit holder for fourteen (14) approved reef sites. We have worked hand in hand with the MDMR since their inception. Together we have established an extensive reef system both within state waters and federal water off the coast of Mississippi. Unfortunately, we rely entirely upon donations. Since Hurricane Katrina these revenue streams have dried up. Any funding received from the Restore Act would be used exclusively for the construction and monitoring of additional reefs on our permitted sites. We have little to no overhead since we are volunteers. Our financial statements and monthly minutes can be found on our website. We pride ourselves on being good stewards of not only the environment but our financial resources as well. The habitat provided by these reefs greatly enhances the marine fisheries in our coastal waters. This has a direct and positive effect on many different aspects of fishing and diving in South Mississippi. This includes individual, commercial and licensed charter fisherman. Additionally, this extends to local businesses such as marinas, bait, tackle and ice sales and boat and fuel sales. Our oganization has a long track record of being good stewards of the resources allotted to us. We will continue in that vein with any funds received as a result of this request.	Hancock Harrison, Jackson	Yes	Yes	Yes	No	Yes	Yes	10	Yes	No		1000000	50000	
	Seafood	21	10/18/2013	Gulfport VA inshore reef enhancement	The Gulfport VA reef is a productive inshore reef. It could be greatly improved and restored by adding more quarry stone and surrounding it with a zigzag breakwater rock pile. According to research, taller reefs attract a greater variety of fish species. The Katrina reef in Biloxi has proven to be a success. Gulfport needs a breakwater reef. With the increasing popularity of kayaks and other small boats this would be a draw for them. The addition of oyster beds in the area would also improve water quality which is a constant issue in this location as well as others where drains empty into the gulf. Use plant material around drains to act as natural water filters. The planting of marsh grass in the protected areas of the breakwater would also filter the water and act as breeding areas for sea life. Add additional marsh grass along the existing jetty by the boat ramps.	Harrison	Yes	No	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	23	10/20/2013	Beach & Marsh Restoration	Planting marsh grass from Hwy 90 to the off shore islands in the MS Sound from New Orleans to Mobile. Allowing for beach spots placed where parking is now available so that less "imported" sand would be used would eliminate having to remove so much sand from the roads saving millions in maintenance per year. Planting the marsh in a staggered pattern running parallel to the beach would allow for boat passage, help with storm surge, protect the beach from the wind, provide estuary for animal and plan life, increase production of all forms of seafood, increase production of seafood industry, clean the water of pollution, make our beaches safer, cleaner, and more beautiful, provide sanctuary for all types of birds, and would increase revenues from tourism and provide fresh clean seafood for our many wonderful restaurants. Such a project would be a WIN, WIN, WIN situation for all of the Gulf Coast in the MS Sound all along the Gulf Coast.	Hancock Harrison, Jackson	Yes	No	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	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, N 30 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 3.Geomorphic features: Brackish Tidal Marsh	Jackson	Yes	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	20	Yes	No		7350000	0	
	Seafood	108	11/14/2013	Comprehensive Water Quality Enhancement Program in the Mississippi Gulf Coast Region	The Mississippi Gulf Coast Region Utility Board (the â€œBoardâ€) respectively presents to the Mississippi Department of Environmental Quality (MDEQ) this proposal to fund a comprehensive water quality enhancement program in the Mississippi Gulf Coast region through the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (the â€œRESTORE Actâ€) 33 U.S.C. Â§ 1321. Background The Board was created pursuant to the Gulf Coast Region Utility Act (the â€œActâ€) Miss. Code Ann. Â§ 49-17-701, et seq., as a forum for the six county utility authorities in the Mississippi Gulf Coast region to collaborate and cooperate regarding, among other things, water, wastewater and storm water issues; to assist in the efficient management of water, wastewater and storm water resources; to develop recommendations pertaining to water, wastewater and storm water systems; and to provide assistance, funding and guidance to the member county authorities to assist in the identification of the best means to meet all present and future water, wastewater and storm water needs in the Mississippi Gulf Coast region. Following Hurricane Katrina, Mississippi Governor Haley Barbour designated $655.7 million of the United States Department of Housing and Urban Development's Community Development Blog Grant (â€œCDBGâ€) funds that Mississippi received for water, wastewater, and storm water infrastructure improvements through the Mississippi Gulf Coast Regional Infrastructure Program (the â€œProgramâ€) and the Mississippi Department of Environmental Quality (â€œMDEQâ€) as the agency responsible for accountability of funds, technical oversight, and project management for the Program. Funding under the Program was utilized for projects by the county utility authorities for five of the six counties in the Gulf Coast region (Pearl River, Stone, Harrison, Jackson, and Hancock Counties), with George County opting out of the Program. Under the Program's Action Plan, the objective was to identify the most critical needs in water and sewer infrastructure in the Gulf Coast Region and to prioritize and implement projects to meet those needs. Projects under the Program provide a backbone for many existing water systems to provide water in the event of future storms and consolidation of wastewater treatment. Water Quality Concerns and Needs Unfortunately, certain activities under the Program's Action Plan were not eligible for CDBG funding. Accordingly, numerous subdivisions and communities throughout the five participating counties in the Gulf Coast region remain unconnected to new wastewater treatment facilities and rely on decentralized, onsite, malfunctioning septic systems that cannot be repaired or replaced with a functioning onsite sewage disposal system due to the high seasonal water tables and poor soil conditions. The failing septic systems discharge raw sewage and effluent with polluting concentrations exceeding established water quality standards into subsurface and surface waters, contributing significant amounts of pollutants, especially nitrogen and microbiological pathogens. Consequently, excessive nitrogen discharges to sensitive coastal waters and phosphorus pollution of inland surface waters, which increase algal growth and lower dissolved oxygen levels, as well as the contamination of important shellfish beds and swimming beaches by pathogens. Most of the rivers and bayous in the Gulf Coast Region are already on Mississippi's Section 303(d) List of Impaired Water Bodies, which include stream reaches, lakes, water body and water body segments with chronic or recurring monitored violations of the applicable water quality criteria where required pollution controls are not sufficient to attain or maintain applicable water quality standards. Proposed Water Quality Enhancement Program The only viable solution to this precarious situation facing the Mississippi Gulf Coast is to establish a comprehensive water quality enhancement program to implement a collection system infrastructure to pump the raw sewage in these unconnected neighborhoods and communities to the new wastewater treatment facilities for treatment and disposal. Such a program is an ideal fit for funding under the RESTORE Act, which has the statutory purpose of supporting programs aimed at helping the Gulf Coast region recover from environmental and economic injuries experience as a result of what is commonly referred to as the BP oil spill, including infrastructure projects benefitting and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal	Pearl River, Stone, Hancock, Harrison, Jackson	Yes	No	Yes	No	Yes	Yes	90	Yes	No		994400000	0	

	Seafood	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	No	Yes	No	Yes	Yes	100	No	Yes		7200000	0	
	Seafood	1241	9/26/2011	Channel Protection, Graveline Bayou Jetty	(ORIGINAL ID#11185) This project would consist of the construction of a new jetty providing protection to the channel, increase access for commercial and recreational fishermen. Increase access to the natural resources of the area. This project would help keep the movement of sand from impacting the channel. The Jetty would parallel the channel.	Jackson	Yes	No	Yes	No	No	Yes		No	No		2022300	0	
	Seafood	1776	3/20/2014	Channel Marker Replacement and Jetty Construction	This project will consist of the construction of a new jetty at the convergence of Graveline Bayou with the Pascagoula Bay that will provide protection to the channel and reduce the effects of silting. In an effort to increase recreational boat traffic, channel markers within the bayou will be updated and replaced. This designation allows for management of preservation areas like the oyster reefs and expedites travel in and around Graveline Bayou. Jetty construction will stabilize the mouth of Graveline Bayou and limit the risk of shifting, as well as focus both tidal and bayou discharges through a single opening, thus combating the effects of littoral drift. With a deep and clear channel, boating traffic for both commercial and recreational can increase. The goal of this project is to increase the recreational opportunities of the adjacent community, allow for greater access to natural resources, and stabilize the convergence of Graveline Bayou with Pascagoula Bay.	Jackson	Yes	No	Yes	No	Yes	Yes		Yes	No		0	0	
	Seafood	1792	3/24/2014	Trent Lott International Airport Stormwater Management	This project will refurbish and update the airport facilities current stormwater system capacity, restore the environmentally effected infrastructure, and expand current facility to increase the emergency response capacity of the County to man-made and natural disasters. The Trent Lott International Airport plays a vital role in not only aviation community by also in the economic growth of the community. By restoring the steams in the flood prone areas surrounding Trent Lott, the airport can be rebuilt and expanded to combat the environmental driven erosion and degradation of the existing facilities caused by lack of watershed management. The airport not only serves corporate businesses, military and local pilots, but also provides logistical support during emergency situations on the Gulf Coast. Local law enforcement and fire fighting agencies relocate to the airport during tropical storms and hurricanes to ensure the ability to respond to duress calls and assist evacuees. The airport is also a safe entrance into the community to deliver supplies, medicine and relief manpower when disaster strikes. Most recently, the airport terminal supported ERA Helicopters LLC during the BP Oil Spill serving as the base for flight operations. The goal of this project will be to increase the stormwater systems capacity, enhance emergency response to manmade and natural disasters as well as expand the existing facilities to address economic development needs. The expansion proposals include a temporary terminal building, runway strengthening, and taxiway geometric improvements.	Jackson	Yes	Yes	Yes	No	No	Yes		Yes	No		0	0	
	Seafood	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	No	Yes	Yes	Yes	No		Yes	Yes		1688000	0	
	Seafood	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	No	Yes	Yes	Yes	Yes	80	Yes	Yes		5720500	0	
	Seafood	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 enterococii 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	No	Yes	No	Yes	No		Yes	Yes		900000	0	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		350000	20000	
	Seafood	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	No	Yes	No	Yes	Yes		No	Yes		320000	20000	
	Seafood	4285	1/5/2015	Tourist Corridor and Gateway Beautification - Enhance Aquatic Habitat	Supporting facts 1.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.Research 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. 3.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. 4.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. 5.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. B Required funding Enhance aquatic habitat around existing piers to promote fishing, crabbing and other recreational activities for tourists - $1,750,000	Harrison,Hancock ,Jackson	Yes	No	Yes	No	Yes	No		Yes	No		1750000	0	

	Seafood	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 NASA'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 Coast'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 region. The second element of this proposal is to expand the Hancock County second home / retirement relocation campaign across the coast to include Harrison and Jackson counties to drive real estate sales	Hancock,Harrison, Jackson	Yes	Yes	Yes	Yes	Yes	Yes	50	Yes	Yes		2019250	0	
	Seafood	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; Workforce development & education;	Jackson, Hancock, Harrison Counties	Yes	Yes	Yes	Yes	No	No		Yes	Yes		8.4	0	
New	Seafood	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	No	Yes	72	Yes	Yes		3250000	0	
New	Seafood	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	No	Yes		Yes	Yes	COMPLETE PROTECTION FROM STORM SURGE	100	0	
New	Seafood	5956	12/3/2020	Convert Highway 90 to a Raised Highway in Portions of Jackson County	On the eastern end of Jackson county, portions of Highway 90 act as a levy restricting the natural flow of water from nearby rivers such as the Pascagoula. Much of this area, from the intersection of Highway 90 ad Highway 63 all the way to the Mississippi/Alabama state line, is surrounded by marsh, wetlands and estuaries which drain into the Mississippi Sound. Currently, adjacent rivers are forced to drain through the handful of bridges, mainly short in length, thereby reducing the marshlands natural ability to filter this river water of the nutrient loading which happens upstream and which can be detrimental to the marine ecosystem in the Mississippi Sound and beyond. By converting Highway 90 to a raised highway, similar in construction to the Mobile Bay Causeway, the watershed would revert closer to it's origins and in doing so contribute to increased water quality and potentially more productive nursery grounds for many of the commercially and recreationally targeted species fish, as well as shrimp, crabs and oysters. This same concept of raising the highway could also lend itself to the portion of Highway 90 which spans the East and West legs of the Pascagoula River (on the boundary of Pascagoula and Gautier). My only caveat is that before undertaking such a project, one would need to ensure that raising the eastern most portion of Highway 90 in Jackson county would not cause undue harm, via flooding, to families which reside south of the highway in that area.	Jackson	Yes	No	No	No	No	Yes		No	No		0	0	
New	Seafood	5957	12/3/2020	Waste Water Treatment Changes	This project focuses on the water treatment plants on the Lower Pascagoula River in Gautier and Pascagoula. Both plants are antquated and in need major improvements and/or relocated to a more desirable location. The MDMR tests the water outside the mouths of both the West and East Pascagoula Rivers and the water contains E.coli bacteria which exceed the limits for healthy oyster production. This project would be a benefit to the health of the ecosystem as well as to the citizens of the great state of MS that use these waters for recreational activities.	Jackson	Yes	Yes	Yes	No	No	Yes		Yes	No		0	0	
New	Seafood	5987	7/16/2021	Springwood Sewer Collection System	This project would provide sanitary sewer service for the Springwood Subdivision. The project will use individual grinder systems at each residence that will discharge into a small diameter sewer collection system. A proposed sewer lift station at the corner of Oak and Kingswood will pump the sewer through a 4-inch sewer force main to the nearest lift station by Cypress Street on US Hwy. 90.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		2573150	0	
New	Seafood	5988	7/20/2021	Bay St. Louis Lift Station Upgrades	The lift station will need upgrades to both pumps and the electrical system to increase capacity. These upgrades are needed do to the possibility of overflows near waterways and wastewater going out into the Bay of St. Louis. Also, pipes and valves will need to be replaced.	Hancock	Yes	No	Yes	No	Yes	Yes		Yes	No		600000	0	
New	Seafood	5989	6/4/2021	NASA Wastewater Connection to HCUA	This project consists of connecting to a force main that NASA has constructed and continuing to run that force main from the North gate of NASA Eastward to the entrance of HCUA's Northern Regional Wastewater Treatment Plant. It will consist of 5 lift stations and 7 miles of pipe. This will allow for NASA officials to shut down both the lagoons permanently and also eliminate the outfall line into the Pearl River.	Hancock	Yes	No	No	No	Yes	Yes	100	Yes	No		10250000	2000000	
New	Seafood	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	No	Yes	No	No	Yes	100	Yes	Yes		4500000	0	

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

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	SEAFOOD	SMALL BUSINESS	TOURISM	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ACT_ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS

	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		51535865	0	
	Seafood	1773	3/20/2014	Graveline Bayou Oyster Bed Restoration	This project will focus on restoring Graveline Bayou's oyster reefs though the planting of new cultch material, dissemination of seed oysters, and cultivation of existing reef beds. The goal of this project is to increase Jackson County's oyster reefs, enhance the ecological diversity of the watershed, provide support to the local seafood industry, and also maintain and monitor the oyster habitat going forward. Oysters are not only a vital part of the seafood industry, but they also stabilize shoreline by breaking up wave energy, provide habitat for other marine organisms, and help filter the water. Oyster reefs in coastal Mississippi have been severely degraded due tot the impact from erosion and sedimentation, drought, predation, and harvesting. These impacts were heightened by direct exposure to the BP Deepwater Horizon Oil Spill. By enhancing the quantity and quality of cultch material currently available and planting new material, the reef locations can be prioritized, oyster density quantified, and overall reef health and informed harvest strategies developed.	Jackson	Yes	Yes	Yes	No	Yes	No		Yes	No		0	0	
	Seafood	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€œopet-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	No	Yes	Yes	Yes	Yes	20	No	Yes		650000	0	Equipment development and purchase
	Seafood	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 (NOANC) 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	No		Yes	Yes		2500000	0	
	Seafood	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: 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. Monitoring of culched sites to study how shell beds behave acoustically over time to get an acoustic signature of a culch area that develops in to a healthy oyster reef. This will save time and man hours in monitoring	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	No	Yes	No		Yes	Yes		1360324	0	

	Seafood	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 Governor'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 species' 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 resource for Native Americans for thousands of years, as evidenced by shell middens at many sites along or near the Gulf Coast. The calcium carbonate shell of the oyster has also long been used for a variety of non-food purposes. Current day commercial and recreational oyster harvesting is an essential component of many communities' way of life.	Harrison	Yes	No	No	Yes	Yes	No		Yes	Yes		9360000	0	
	Seafood	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	No	No	No	Yes	No		No	Yes		800000	0	
	Seafood	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	Yes	No		Yes	No		2469200	0	
	Seafood	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	Yes	No		Yes	No		5068500	0	
	Seafood	2025	11/9/2011	Mississippi Early Resource Restoration Using Artificial Reefs	This project intends to restore and enhance existing reefs within the Mississippi Sound using crushed concrete or limestone. These reefs would be low profile. Restoration would consist of adding acreage to the existing artificial reef footprint. MDMR's Artificial Reef Bureau would be working with the nonprofit group Mississippi Gulf Fishing Banks (MGFB). MGFB is made up of fishermen throughout Mississippi whose interests are in creating valuable marine habitat in Mississippi's nearshore and offshore waters.	Hancock, Harrison, Jackson	Yes	No	No	No	Yes	No		No	No	Yes	6700000	0	
	Seafood	2026	11/9/2011	Early Restoration of Oyster Cultch Area in Mississippi Sound	The goal of this project is to restore approximately oyster cultch areas in the marine waters of the State of Mississippi. The state of Mississippi has approximately 12,000 acres of total cultch areas. About 9,000 acres of the oyster cultch areas can be harvested while about 3,000 acres of cultch areas are closed to harvest. This project would restore and enhance the major and minor oyster cultch areas within the marine waters of Mississippi Sound of Mississippi. This project will utilize cultch planting to improve the oyster cultch areas. Specific activities consist of the following: (1) Deploying Cultch Material: Cultch would be deployed within existing oyster cultch areas. Locations for potential cultch deployment are known based on recent surveys. (2) Monitoring: MDMR staff would regularly monitor the newly established oyster cultch areas by live collections to assess the overall health of the oyster cultch. The cost for this project is $10,000,000 to $12,000,000.	Hancock, Harrison	Yes	No	No	No	Yes	No		No	No	Yes	12000000	0	
	Seafood	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 designed to collect lidar bathymetry data in clear and turbid waters, such as the Sound. Together with its tightly coupled hyperspectral and Red Green Blue digital imagery, CZMIL can fuse active lidar	Hancock,St Tammany,Mobile ,Jackson,Harrison	Yes	No	Yes	Yes	Yes	Yes	10	Yes	Yes		4515000	0	
	Seafood	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	Yes	Yes	No	No		Yes	Yes		15	0	
	Seafood	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 funder'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	No	Yes	No	Yes	No		Yes	Yes		2000000	0	monitoring and Data Synthesis
	Seafood	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	No	Yes	No	Yes	No		No	Yes		0	0	
	Seafood	4350	4/14/2015	Restoration of Deer Island with Beneficial Use of Dredged material	Please see Attached Proposal	Harrison	Yes	No	Yes	No	Yes	No		No	No		3000000	0	

	Seafood	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, 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 entity'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 Mississippi'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 allow federal, state and local agencies to more accurately and more efficiently assess and manage air, water and ground pollution. More current and more specific data should lead to better, shorter	Harrison	Yes	Yes	Yes	Yes	Yes	Yes	85	Yes	Yes	agriculture	15000000	0	
	Seafood	5531	2/14/2017	Atlantic Street Sewer Collection System	Proposed project includes the installation of low pressure sanitary sewer force mains, grinder stations, associated valves and pump stations to connect approximately 75 existing houses to a lower pressure grinder sewer system. This collection system would allow for collection and treatment of sanitary sewer in a low lying, tidally influenced area. Currently, during heavy rains and high tides, the on site treatment systems (primarily septic tanks) are discharging raw sewage to nearby drainage systems and thus contaminating the local environment and canals.	Hancock	Yes	No	Yes	No	No	Yes	100	Yes	No		3000000	0	
	Seafood	5533	2/16/2017	Hancock County Sewer Force Main Beach Crossings	This project consists of replacing existing above grade sewer force main crossings with bored in place crossings that cross approximately 12 existing natural drainage ditches along Beach Blvd. These crossings serve to transport sanitary sewer from various areas of southern Hancock County and include major users such as The Silver Slipper Casino. The crossings constitute constant maintenance due the frequent immersion in salt water during storm or high tide conditions. They also pose an environmental threat due to the location of the crossings and close proximity to the MS sound should any leaks occur. The proposed crossing would consist of an HDPE casing pipe and HDPE carrier pipe which would be fused to the existing force main thus virtually eliminating any maintenance and likelihood of any future leaks.	Hancock	Yes	No	Yes	No	No	Yes	100	Yes	No		500000	0	
	Seafood	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	No	Yes	No	Yes	Yes		Yes	Yes		1711190	0	Monitoring
	Seafood	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,Jackson,Hancock,Mobile,St Tammany,Stone,Pearl River	Yes	Yes	No	Yes	Yes	Yes		Yes	No		300000	50000	
	Seafood	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 applicant'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	No	Yes	Yes		Yes	Yes		0	0	
	Seafood	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 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: â€¢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. â€¢Protects areas that provide clean water for our natural resources along the Wolf River and into the Bay of Saint Louis. â€¢Provides valuable habitat for a wide variety of plants and animals native to Mississippi, as well as migratory birds. â€¢Opportunities for low impact recreational activities such as kayaking, birdwatching, fishing, and other wildlife observation â€¢Adds to complete corridors of conservation land.	Harrison	Yes	Yes	Yes	No	Yes	No		Yes	Yes		0	0	
	Seafood	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	No	No	No	No	Yes	100	Yes	Yes		15700000	500000	

New	Seafood	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 Carré 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	No	No	No	No	Yes	100	Yes	Yes		15700000	500000	

PROJECT ALREADY IN BROAD PROGRAMS OR TOO BROADLY WRITTEN TO BE IMPLEMENTED (GREEN CELLS)

	Go Coast	PROJECT ID	PROPOSAL DATE	PROJECT NAME	DESCRIPTION	LOC_COUNTY	SEAFOOD	SMALL BUSINESS	TOURISM	WORKFORCE DEVELOPMENT	ECO RESTORATION	INFRASTRUCTURE COMPONENT	INFRASTRUCTURE_BUDGET_PCT	ECONOMIC_DEVELOPMENT	RESEARCH AND EDUCATION	ACT_OTHER	ESTIMATED_COST	FUNDING_AVAILABLE	COMMENTS
	Seafood	1240	9/26/2011	Water Quality, Flood Minimization, Access, Shoreline Protection and Sediment Removal in Various Bayous	(ORIGINAL (DE1118G) This project would consist of flood minimization, removal and disposal of obstructions, improve water quality, stabilize shoreline, sediment removal, increase access to natural resources, improve storm water runoff, reduce flooding and improve fisheries, marine and wildlife habitats. The bayous and watersheds areas involved with proposed costs are: Community Ave/Bayou Yazoo Watershed ($88,000.00) Pascagoula Upper Bayou Casotte Drainage Area ($808,000.00) Pascagoula 11th Street/Parsley Street Watershed ($972,514.00) Pascagoula Inner Harbor/Lake Yazoo ($2,894,000.00) Pascagoula Bayou Chicot Watershed Area ($825,000.00) Pascagoula Canty Street Bayou ($1,260,000.00) Pascagoula Point Clear Watershed ($1,549,000.00) Gautier Hickory Hills Watershed ($1,458,000.00) Gautier Glenn Heath/Holly Heath Watershed ($92,000.00) Gautier Rolling Meadows Watershed ($160,000.00) Gautier De La Pointe/Frenchmans Dr. ($91,330.00) Gautier Bayou Pierre/Italian Isle Watershed ($1,031,000.00) Gautier	Jackson	Yes	No	Yes	No	No	Yes		No	No		3396087	0	
	Seafood	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, Jackson	Yes	Yes	Yes	Yes	Yes	No		Yes	No		0	0	
	Seafood	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	15	Yes	Yes	Data need	5000000	0	
	Seafood	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 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 Investments†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€œabut for†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		100000000	0	
New	Seafood	5892	7/31/2019	Hancock County Utility Authority - Kiln / Delisle Phase 3	This project is Phase 3 of the area East of the Hancock County Arena. It will be to install a sewer collection system with grinder pumps and lift stations in the designated area to connect approximately 80 homes and discontinue the use of septic tanks. These tanks are close to creeks, streams and bayous that empty out through Rotton Bayou into the Bay of St. Louis and eventually into the Gulf of Mexico. Rotten Bayou is on the EPA list of impaired waterways. The wastewater from this area will then be transported to the Northern Regional Wastewater Treatment Plant for proper treatment.	Hancock	Yes	No	Yes	No	Yes	Yes	70	Yes	No		2529550	0	