

*Turkey Creek Watershed Implementation Plan*  
*Update: January 2010*

*I. PROTECTION GOAL - To defend the existing natural and cultural resources of the Turkey Creek Watershed from further degradation caused by encroachment, abuse or neglect.*

A. Management: Forestry and Construction BMP strategies for Protection are listed below. (Not in order of priority.)

1. Fund and acquire identified priority conservation areas in the Turkey Creek Greenway from Canal Road area in Long Beach to the confluence with Bernard Bayou. (see Greenway Map, Appendix A). Work to assure that acquisitions will help complete connectivity goals of the community.

- Proposed Timeline: 2006 and early 2007
- Lead organizations: City of Gulfport with funding from CIAP I already awarded LTMCP with funding from 319 program, CIAP II and other funding programs
- Update: City of Gulfport purchased 180.57 acres as part of CIAP I; Harrison County has been awarded \$250,000 for land acquisition as part of CIAP II; LTMCP has \$500,000 in 319 funds.

2. Promote the development of "green design" subdivisions in areas off 28<sup>th</sup> street that are being zoned T3.

- Proposed Timeline: on-going
- Possible Lead organizations: NGCC with support from LTMCP, TCCI, NGCC and City of Gulfport
- Update: TCCI and NGCLT held workshops on green design

3. Work to complete proposed "green design" subdivision model in Bayou Bernard headwaters near County Farm Road. The tract was recently cutover and is now slated for a residential development. It needs restoration and long-term protection of wetlands through fee simple donation or conservation easement donation. Project to serve as a model project for the Turkey Creek Watershed.

- Proposed Timeline: 2006 and early 2007
- Possible Lead organization: LTMCP and NGCC. Work in progress
- Update: On hold due to damage from Katrina and the economy

4. Create corridor protection zones by promoting conservation options for landowners, such as conservation easements and Transfer of Development Rights (TDRs). Currently, Mississippi does not have statutes that favor TDRs. One recommendation of the Governor's commission is to consider a change the state statutes. If they are changed, the City would need to specify the donor areas for TDRs. In future, be sure that Turkey Creek is identified as a donor site for TDRs in City of Gulfport.

- Proposed Timeline: 2008
- Possible Lead organizations: LTMCP, TCCI, NGCC and City of Gulfport
- Update: As part of CIAP II, LTMCP has a Smart Conservation grant to develop guidance for transfer of development rights. CIAP II plan was submitted in



2006, but was just approved in 2009. Currently preparing RFP to hire consultant

5. Work with City of Gulfport to support, revise if needed and enforce a city-wide tree protection ordinance in Gulfport.

- Proposed Timeline: 2007
- Possible Lead organizations: Turkey Creekkeeper, LTMCP, MS Urban Forestry Council
- Update: LTMCP initiated and continues to facilitate Replant South Mississippi to restore almost 250,000 trees lost during Katrina. City of Gulfport has revised their ordinance and now LTMCP is working through Replant to develop a coast-wide tree ordinance.

6. Provide education about streamside buffers and need to protect and enhance the native tree canopy, particularly in the 250 - 500 foot streamside management zone along Turkey Creek. Focus on native hardwood trees and shrubs typical of coastal plain habitats.

- Proposed Timeline: 2008
- Possible Lead organizations: TCCI, MS Urban Forestry Council, LTMCP
- Update: LTMCP developed a watershed film with plans to show it at community and civic meetings, schools, festivals, etc.; LTMCP hosts the Watershed Harmony puppet show at area schools each year; through the Replant program, planted native hardwoods along the creek bank at tree-planting events; MPUMC developed and maintains a native tree nursery behind the Head Start facility on Rippey Road

7. Wetland protection is of primary importance to flood control and protection of Turkey Creek watershed. Establish a "Creekkeeper" program to review wetland permits and report wetland violations to regulatory agencies.

- Proposed Timeline: announced October, 2006!
- Lead organization: TCCI
- Update: Established a Creekkeeper Stream Team from MPUMC in November 2008 through the Adopt-a-Stream program; Have held two Renew Our Rivers events (sponsored by Southern Company); 5-Star Restoration project

8. Promote the implementation of student-led designs for biking paths in City of Long Beach using canals to link schools with residential communities and ball parks. This is an important strategy for City of Long Beach (canals) as well as North Gulfport and Turkey Creek Community.

- Proposed Timeline: 2008
- Lead organizations: City of Long Beach, City of Gulfport, TCCI and LTMCP
- Update: Worked with students from Quarles Elementary in Long Beach to develop the trails. They won a national award for their effort. LTMCP helped them find grant funding for enhancement from MDOT, but after City of Long Beach took over implementation of grant after Katrina.

B. Education and Outreach strategies for Protection are listed below. See Appendix H. (Not in order of priority.)

1. Working with the Education, Recreation and Public Health Taskforce of the Turkey Creek North Gulfport Community Plan, provide for an environmental science educator



and coordinator for the Turkey Creek Community to implement education strategies put forth in this plan working through the Turkey Creek education. Recreation and public health task force.

- Proposed Timeline: Fall 2006
- Possible Lead organization: TCCI with partial funding through MDEQ 319 or EPA
- Update: Watershed Harmony puppet show has been shown in local schools, LTMCP developed a watershed education film and is currently preparing web-based Teacher Resources similar to those created for Red Creek; LTMCP shared the MDEQ Coastal Streams Citizens Guide with all Gulfport councilmen and Board of Supervisors; Currently planning a Fishing Clinic for area youth on March 28

2. Provide additional watershed education about Turkey Creek through updated, state of the art TCCI websites.

- Proposed Timeline: ongoing from 2006
- Possible Lead organization: TCCI with assistance from MIG
- Update:

3. Host "Wetlands 101 workshop" to train local residents and contractors about how to recognize a wetland and how to engage in the permitting process.

- Timeline: Completed September 2006!
- Lead organization: Gulf Restoration Network !
- Update: Workshops have been held through the Grand Bay NERR and through the Miss State University Master Naturalist Program

4. Provide a "Creekkeeper" for Turkey Creek: local capacity to monitor water quality and water quantity issues, oversee "adopt-a-stream" program.

- Proposed Timeline: 2007
- Possible Lead organization: TCCI
- Update: LTMCP facilitated Adopt-a-Stream training and MPUMC maintains a stream team that monitors water quality; MDEQ pathogen study

5. Begin construction of public access to the lower reaches of the Creek (Canal Road to Bernard Bayou). Public access should accommodate the following activities: bird watching, canoeing, walking, biking and science education.

#### Outdoor Environmental Classroom

- Timeline: Completed Summer 2006!
- Lead organization: Harrison County School Board, North Gulfport 7<sup>th</sup> & 8<sup>th</sup> Grade School, Visions Service Adventures)
- Update: Acquired land; currently performing restoration before building the trails; working with airport authority to develop trails on their property to connect to LTMCP's greenway for access from Rippey Road

Mt. Pleasant UMC's Turkey Creek Nature Area (Audubon Birding Site #24)

- Proposed Timeline -: begin summer 2006
- Lead organizations: Mt. Pleasant UMC, TCCI, Audubon
- Update: Audubon Birding map is being updated to include LTMCP greenway properties



6. Provide interpretation at public access points: (coordinated visual cues: brochures, maps, and signage for recreational activities such as canoeing, fishing, bird watching).
  - Proposed Timeline: Spring 2007
  - Possible Lead organizations: TCCI, Audubon Mississippi
  - Update: on hold until restoration is complete. Trail head signage for all LTMCP trails is currently being designed.
7. Provide public fishing piers on the Creek.
  - Proposed Timeline: Begin Fall 2006
  - Possible Lead organization: TCCI and MS Wildlife Fisheries and Parks
  - Update: MPUMC has developed trails and built small wooden bridges for fishing
8. Provide enhanced public access to Turkey Creek by creating walking trails to connect schools, parks, neighborhoods and businesses. Leverage Mississippi Tidelands Funds already allocated to Turkey Creek (for example, at the Forrest Heights levee).
  - Possible Timeline: Summer 2006
  - Possible Lead organizations: Gulfport Airport, City of Gulfport, TCCI
  - Update: Airport has a CIAP II grant to develop trails on their property. LTMCP is working with the airport to connect their trails to Turkey Creek greenway so that there are trail heads on Rippey Road (behind the Head Start building and on the proposed Evans acquisition)
9. Work with Forrest Heights Boys and Girls Clubs, Harrison County and City of Gulfport to maximize connectivity between the new clubhouse, the Youter Lee Keyes Park and the proposed levee trail. Painted bicycle crossing at Ohio.
  - Proposed Timeline: Begin in 2007.
  - Possible Lead organization: Forrest Heights Homeowners and Renters Association, TCCI
  - Update: When the Boys and Girls Club building is rebuilt, the Turkey Creek Greenway properties should be restored and the trails should ready to connect
10. Provide signage where federal, state, county and city roads cross into the Turkey Creek Watershed (see EPA program). "You are entering the Turkey Creek Watershed".
  - Possible Timeline: 2007
  - Lead organizations: MDEQ, EPA and MDOT
  - Update: Still working with MDOT to obtain permission. We've had two major discussions with them about it. At the last basin team meeting, MDOT representative indicated that they might consider it
11. Identify other signage needs and messages that will provide long-term watershed education and promote Personal Responsibility in a Desirable Environment (PRIDE).
  - Timeline: ongoing.
  - Lead organizations: Mt. Pleasant UMC Environmental Ministry and Mississippi Gulf Coast Affiliate of Keep Mississippi Beautiful
  - Update: Upland and streamside signage has been installed along the creek
12. Make Turkey Creek a Gateway for visitors to City of Gulfport and Mississippi Gulf Coast. Beautify Hwy 49 corridor. Tie-in to the native nursery goal.
  - Timeline: Begin Fall 2006

- Lead organization: North Gulfport Community Land Conservancy, Land Trust for Mississippi Coastal Plain, Audubon Mississippi, NRCS, City of Gulfport
  - Update: City of Gulfport has done major native tree planting along Highway 49 and at the I-10/Hwy 49 interchange
13. Schedule the Watershed Harmony Puppet show for Turkey Creek community (at the 7<sup>th</sup> and 8<sup>th</sup> grade school. Charles Dubra is the principal).
- Timeline: fall 2006
  - Lead organization: MDEQ
  - Update: Puppet show was shown to Middle School in 2006 and to some elementary schools in 2008 and 2009
14. Expand the "Turkey Creek Cane Pole Derby" and "Creek Sweep" for 2006.
- Timeline: summer 2006
  - Lead organization: TCCI
  - Update: CreekSweep has been conducted for several years and has merged with Southern Company's Renew Our Rivers; currently planning for a Fishing Clinic in March 2010
15. Create the first Turkey Creek Heritage Festival (possibly to coincide with annual Mt. Pleasant Anniversary, first weekend in August).
- Timeline: summer 2007
  - Lead organization: TCCI in partnership with Mt. Pleasant UMC and South Mississippi Heritage Program (DMR)
  - Update: delayed due to Katrina; MPUMC held its first annual community celebration in November 2009 - Turkey Creek watershed film was shown



**II. RESTORATION GOAL - *To actively initiate or accelerate the recovery of the ecological and cultural health, integrity and sustainability of the Turkey Creek Watershed wherever it has been degraded, damaged or destroyed.***

**A. Management: Restoration strategies listed below. (Not in order of priority.)**

1. Forrest Heights levee restoration and re-engineering of levees. (restored and approved and tied to the greenway concept). The community wants it to be an ecologically functional, visibly appealing and publicly accessible component of the Turkey Creek Greenway.

- Timeline: begin in second round of MSCIP projects
- Lead organizations: NRCS, City of Gulfport, NGCC, TCCU
- Update: USACE is doing this as part of MsCIP

2. Proactively guide the post-Katrina debris removal on Turkey Creek for canoeing and fishing passage. Work with the three agencies assigned to the debris removal to assure that all actions taken are administered in an environmentally friendly manner: Harrison County Board of Supervisors, Mississippi Department of Marine Resources and Natural Resources Conservation Services

- Timeline: begin springs and summer 2006
- Lead organization: Turkey Creekkeeper, MDMR, NRCS, Army COE
- Update: Done - TCCI, MDMR, USACE, and NRCS

3. Design and implement bayhead swamp restoration project at Mt. Pleasant UMC's Turkey Creek Nature Area (Audubon Birding Site #24). This identified restoration project will provide flood storage during storm events and reduce non-point source pollution by filtering storm water. Ecological restoration of this area will enhance the recreational fishing opportunities at this historic fishing hole. It will also provide important wildlife habitat, particularly bird habitat for the Audubon Coastal Birding Trail site located here.

- Timeline: planning to begin winter 2007
- Lead organizations: Mt. Pleasant UMC, Audubon and MDMR (proposal to Coastal Preserves)
- Update: Accomplished by volunteers

4. Establish an aggressive cogongrass eradication program at "Camp Cogon", an area between Rippy Road, Three Rivers Road, Airport Crash Zone and fuel storage tanks. This cogongrass infestation not only degrades wildlife habitat and biodiversity, it also poses a major public safety threat because of the increased risk of higher intensity wildfires. Work with Airport, NRCS, City and County Public Safety Officials to recognize and mitigate the public safety concerns raised by the cogongrass fields.

- Timeline: Spring 2006
- Lead organizations: NRCS, Airport
- Update: A cogon workshop was held about eradication of cogon; airport attended the workshop and has been diligent about treating it as well as preventing it

5. Design and implement an urban forest renewal program (tree planting plan) focused on tree plantings same comments as before (such as live oak, cypress, cedar,



magnolia, bay, green ash, red maple, cherry bark oak.) at the following sites:

- a. Forrest Heights Baptist Church, on the creek's south bank
- b. Forrest Heights levee,
- c. Forrest Heights Boys and Girls Club
- d. North Gulfport 7<sup>th</sup> and 8<sup>th</sup> Grade School
- e. Will Skinner's land, south side of the creek,
- f. Derrick Evan's vacant 7 acres from Rippey Road south (200' x 1600'),
- g. MLK Boulevard,
- h. North Gulfport side streets,
- i. LC Jones Public Housing Project,
- j. Mt. Pleasant UMC's Turkey Creek Nature Area (Audubon Birding Site #24),
- k. Sites at Gulfport/Biloxi Airport, as identified by airport,
- l. Louisiana Avenue drainage project,
- m. Three Rivers - Creosote Road corridor.
  - Timeline: begin in fall 2006
  - Lead organizations: Audubon, LTMCP and MS Urban Forestry Council
  - Update: Through the Replant South Mississippi program, Turkey Creek community gets as many native hardwood trees as they can use. Some sites listed above have not yet been planted because house/street restoration is not complete.

6. Work with the Airport to reforest the RPZ Zone and other properties with native shrubs and grasses (trees where allowable). Currently airport has funding for noise reduction - trees and shrubs would certainly reduce noise pollution. An on-going productive dialogue with the airport could be a key element to success of the Turkey Creek Watershed Implementation Plan.

- Timeline: begin discussions with airport in 2006
- Lead organizations: LTMCP, TCCI and NGCC
- Update: Held three meetings with airport authority and their engineering firm. They consulted with Jim Kelly about native species that wouldn't be in violation of FAA regulations.

Also, work with the airport to mitigate within the watershed. Consider asking COE to establish an in-lieu program?

- Update: LTMCP submitted a prospectus for operating an in-lieu fee program for coastal Mississippi in September. It was approved in November and the ILF Program Instrument is currently being revised for signature of the IRT. Once signed by all members of the IRT, the Coastal Mississippi ILF program will be available for mitigation.

7. Expand and utilize Turkey Creek Native Plant Nursery to promote and facilitate urban reforestation.

- Timeline: begin in fall 2006
- Lead organizations: Audubon, MS Urban Forestry Council and NRCS
- Update: Complete - behind Head Start school on Rippey Road

8. Clean-up neighborhood ditches and restore filtering function with native vegetation such as duck potato. Install screens on culverts to trap trash and keep it out of the Creek. Stencil storm drains.



- Timeline: First annual, “Remarkable Riches of Splendid Ditches” celebration and watershed-wide creek and ditch clean-up. May 2007
  - Lead organization: TCCI
  - Update: Storm drains have been stenciled
9. Work to meet the TMDL for fecal coliform by removing point sources (get the Canal Road Mobile Home Park to connect to public sewerage.)
- Timeline: on-going discussion
  - Lead organizations: Harrison County. MS Health Department. MDEQ
  - Update: Harrison County Board of Supervisors adopted this project
10. Advocate for cleaner water: We need to meet or exceed the TMDL for fecal coliform by minimizing non-point sources (reducing the number of failing septic systems). Private entities do not have the ability to take direct action on failing septic systems; they can however work diligently to keep the issue and desired future condition in the minds and actions of politicians and regulatory agencies. Specifically, public infrastructure needs to be created and regulations enforced to (a) get Ridgecrest Estates to stop discharging into a sewerage lagoon, (b) get City of Gulfport to reduce accidental spills during flood events, (c) stop new septic systems from going online.
- Timeline: on-going advocacy, decision-maker education
  - Lead organizations: Turkey Creekkeeper with MS Health Department. MDEQ. Harrison County Board of Supervisors, City of Gulfport
  - Update: see TMDL Report; also, Harrison County has a CIAP II grant to provide for sewer as part of the Regional Wastewater Plan
11. Take action for cleaner water: We need to meet or exceed the TMDL for pH by increasing riparian buffer zones and reducing storm-water runoff.
- Timeline: on-going advocacy, decision-maker education
  - Lead organization to increase riparian buffer zones: LTMCP, Harrison County Board of Supervisors
  - Update: On-going acquisition of property for conservation by LTMCP, MDMR, Harrison County, etc.
12. Take action for cleaner water: We need to meet the TMDL for pH by reducing pine needle litter resulting in higher soil pH in addition to reducing fire hazard and increasing wildlife habitat.
- Timeline: on-going advocacy, decision-maker education
  - Lead organization: MS Forestry Commission, NRCS, Prescribed Fire Cooperative
  - Update: Working with MS Forestry Commission to see if any of the LTMCP sites can be slow-burned; during restoration, avoiding replanting with pine trees - only hardwoods
13. Assess geomorphic stability of Turkey Creek, identify stream bank/channel restoration demonstration areas and implement a one-mile passive stream restoration project. Identify areas to restore tidal marshes and wetlands creating additional storm water storage capacity in riparian zone. Rip rap is ugly: Design and construct more effective and aesthetic bank stabilization methods. Identify areas where rip-rap needs to be removed and natural stream stabilization technology utilized.
- Timeline: begin winter 2007



- Lead organizations: possible - TCCI or LTMCP with funding from MDEQ/EPA
- Update: Streamside restoration next to Forest Heights Baptist Church - all tall trees were removed by the City; Volunteers from LTMCP and Boys & Girls Club planted willows, maples and cypress trees near streambank and oaks upland

14. Work to complete proposed “green design” subdivision model in Bayou Bernard headwaters near County Farm Road and implement a native vegetation restoration. The tract was recently cutover and is now slated for a residential development. It needs restoration and long-term protection of wetlands through fee simple donation or conservation easement donation. Project to serve as a model project for future development in the Turkey Creek Watershed, particularly on the 28<sup>th</sup> street corridor.

Ref: the items under protection.

- Timeline: 2006 and early 2007
- Lead organization: LTMCP. Work in progress
- Update: Delayed due to Katrina/economy

B. Education and Outreach Strategies for Restoration are listed below. (Not in order of priority.)

1. Expand “CreekSweep” 2006 (September coastal cleanup).

- Timeline: September 2006
- Lead organization: TCCI
- Update: CreekSweep merged into Renew Our Rivers; in addition NGCLT, TCCI and LTMCP now participate in annual Coastal Cleanup

2. Advocate for the completion of clean-up at primary brownfield restoration sites: creosote plant, Seabee base (agent orange contamination), Teledyne Irby Steel, ChemFax, WC Fore Trucking, public dump off Canal Road and Stanbro site on creek at Washington Avenue.

- Timeline: ongoing discussion
- Lead organization: Turkey Creek Keeper, Sierra Club, Gulf Restoration Network (GRN), TCCI
- Update:

3. Advocate to minimize/reduce impact of Airport’s expansion plans, especially car wash/car rental (12 acres).

- Timeline: ongoing discussion
- Lead organization: Turkey Creekkeeper
- Update: Not successful - car wash / rental car place, but after many conversations with the airport authority, they seem to understand Turkey Creek issues a little better

4. Advocate for light industrial zoning as opposed to heavy industrial zoning, for example Arkansas Avenue.

- Timeline: now with Smart Code discussions with City of Gulfport
- Lead organization: Turkey Creekkeeper and City of Gulfport



- Update: TCCI/NGCLT have held discussions regarding Smart Code with the City and some have been adopted
5. In a productive manner, address the public's concern about air and water quality issues caused by the concrete plant on Creosote Road.
- Timeline: ongoing discussion
  - Lead organizations: Turkey Creekkeeper, MDEQ and EPA
  - Update:
6. Plan the first annual "Remarkable Riches of Splendid Ditches" celebration and watershed-wide ditch clean-up to be held in May 2007.
- Timeline: planning new event should begin in late winter 2007
  - Lead organization: TCCI
  - Update: Delayed
7. Advocate for DEQ to change use designation of Turkey Creek from Fish and Wildlife Support to Recreation, making it safer for those swimming/immersion.
- Timeline: begin discussion with this watershed implementation plan
  - Lead organization: Turkey Creek Keeper and TCCI
  - Update: TCCI - ongoing
8. Provide educational opportunities to private landowners about (1) Best Management Practices such as forestry, construction and streamside management (2) Conservation options for landowners, such as conservation easements, transfer of development rights, fee simple donations.
- Timeline: begin planning a series of workshops for 2007 or 2008
  - Lead organizations: LTMCP, NRCS and TCCI
  - Update: LTMCP held conservation easement workshop for landowners, attorneys, real estate agents and developers