

***Regional Coordination Meeting
Mississippi Coastal Improvement Project
Workshop Transcripts
April 7, 2006***



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Executive Summary

"The spirit of Coastal Mississippians has remained strong. Mississippians are not about sitting around feeling sorry for themselves and waiting for someone to come to their rescue. Mississippians are about hitching up their britches and getting to work to help themselves and help their neighbors.

- Governor Haley Barbour

Over 70 representatives from Federal, State and local governments met in Biloxi, MS on April 7, 2006 for a Regional Coordination Workshop. The workshop had 3 objectives: 1. Developing a set of guiding planning principals for the planning process, 2. Creating a comprehensive list of potential improvements for coastal Mississippi and 3. Attaching these recommendations to specific locations on maps of Jackson, Harrison and Hancock Counties.

The process focused on identifying a wide range of possible alternatives, not evaluating any of them. Feasibility, urgency, cost and other criteria will be applied in succeeding process steps. This workshop's objective was to solicit the input of local and State government partners to develop a comprehensive list of possible planning options to assure Corps planners have heard from as many perspectives as possible.

The group was welcomed by Colonel Peter Taylor, U.S. Army Corps of Engineers Commander for the Mobile District. Although Congressionally-mandated timelines are extremely tight (a preliminary report by 6/30/2006 and final recommendations due by 12/07) the Colonel believes the MSCIP process represents a unique opportunity for two reasons. First, public input on the process will be actively encouraged. While Corps planners are gathering a slate of potential planning options, the process is open to good ideas from all sources. Secondly, streamlined cost-effective criteria will guide decision making for planning recommendations. Normal Corps requirements for rigorous cost-benefit analysis and national economic development have been waived for this process.

The MSCIP is the number one priority in the Mobile District.

Dr. Billy Walker of the Mississippi Department of Marine Resources provided a State perspective on planning efforts. He presented the following financial highlights:

- Prior to Katrina, Congress appropriated \$2.5 million to the Corps through Wetlands Restoration and Development Act for continued restoration of Deer Island.
- In the December 2006 supplemental, Congress appropriated an additional \$12.5 million to the Corps for restoration of Deer Island and other coastal systems.
- Also in December, Congress appropriated \$199 million to USDA, some \$20 million of which is designated for oyster reef restoration in Mississippi.
- Congress has directed Corps to conduct a six-month study to determine what Coastal Mississippi needs to do to restore ecosystem function and mitigate against future storm damage identifying how this can best be done and how much it will cost.
- The State will continue to work with Congress to fund the Governor's Restoration Initiative.

Coleman Long of the U.S. Army Corps of Engineers, Mobile District outlined Mississippi Coastal Improvement Project. His presentation described the MSCIP major impacted areas:

- **Transportation:** Highway 90 and Bridges at Biloxi and Bay St. Louis
- **Residential Areas:** Pass Christian, Waveland, Bay St. Louis, Gulfport, Biloxi



- **Commercial and Industrial Areas:** Port of Gulfport, Casino Industry, Pascagoula Chevron Refinery and shipbuilding facilities
- **Environmental Resources:** Deer Island, Barrier Islands, Forested Wetlands (coast wide), Oyster Reefs (coast wide)

Mr. Long described the key areas of the State's strategy for rebuilding coastal resources and MSCIP comprehensive improvements. While a variety of improvements are being considered, multiple measures providing multiple benefits will be preferred. Mr. Long presented examples of structures for hurricane storm surge, barrier islands, surge barriers, water control gates, levees and offshore breakwaters to trigger creative thinking.

Brett Boston of Group Solutions, Inc. described the public involvement segment of the planning process:

4/7 Regional Coordination Workshop of State and local government agencies recommended guiding principles for process, generated an initial list of county and coastwide projects alternatives and posted these recommendations to County maps. This step focused on idea-generation, not evaluation. These options will be refined and presented for public comment at a series of workshops for additional brainstorming. The goal of this process step is to assure a complete list of alternatives has been generated, not an evaluation of the process.

3 Public Workshops will be held at Mississippi Gulf Coast Community College on 4/10, 19th Street Community Center in Gulfport 4/11 and at Waveland Middle School on 4/13. Running from 6:00 to 8:00 p.m., each workshop will overview the MSCIP, capture reactions to initial options, principles & alternatives and submit additional concepts and concerns.

Participants will have the opportunity to offer comments and ideas in whatever format is most comfortable for them: via PCs, written comments or to a court reporter. Additionally, comments may be submitted via a project website at <http://mscip.usace.army.mil>.

An internet-based webcast is scheduled for April 18 to enable those unable to attend the public workshops and displaced coastal residents an option for participating in the process. This event will follow closely the format of the public workshops.

A 2nd Regional Coordination Meeting will be held April 24 and 25 for government agencies. Consolidated recommendations from the public input process will be reviewed. Participants will begin rating the perceived strengths and weaknesses of each option and begin the evaluation process.

A 2nd Round of Public Workshops will be scheduled in Gautier, Gulfport and Waveland May 1, 2 and 3 to provide the general public with an opportunity to express preferences and additional comment on the set of plan alternatives emerging from Regional Coordination Meeting II. **A second webcast** is scheduled for May 4.

Results

25 planning principles and over 60 specific structural alternatives are being carried forward to Corps planners. These will be reviewed by the planning team, merged and clarified and presented at public workshops April 10, 11 and 13th.

Planning Principals

Workshop participants used a unique methodology to create this list of alternatives. Using networked PCs, team members were able to simultaneously and anonymously add ideas to common list, visible to all. Additionally, participants had the option of attaching comments to any idea contributed by other team members.

What follows is merged list where similar ideas have been grouped under a common banner. All bulleted comments were entered by workshop participants. Discussion themes that were added by the workshop facilitators are indicated in italics.

The list of planning principles appears in the order workshop participants entered them, not in any order of priority.

1. Consider mitigation already in process as result of the Governor's Commission on rebuilding: i.e. new building codes, setbacks, higher elevations.

- Include repair standards in building codes (e.g. replacement old electrical wiring flooded by salt water).

2. Try to use solutions that mimic natural systems that have worked in the past rather than over-engineering systems.

- In all cases, consider natural system restoration and solutions over engineering solutions.
- Minimize environmental impacts.
- Maximize environmental benefits.
- Maintain natural processes to the maximum extent possible.
- Consider natural restoration over artificial restoration.
- Minimize impervious surfaces
- Consider impervious surfaces EVERYWHERE not just in wetland areas on the overall hydrology systems.
- Create green spaces. Do not build Hwy 90.

3. Leverage these projects with other regional initiatives/opportunities.

- *DEQ's 6-county stormwater management authority needs to be coordinated with Corps efforts.*
- *For example, use water management to stop the silt problems in the bayou. Don't treat as isolated events*
- Increase internal communication within federal agencies to improve flow of information while minimizing the time demand on local agencies.
- Think beyond jurisdictional borders.
- Operate through partnership as much as possible. Be inclusive, involving all stakeholders.
- Utilize and maybe formalize informal working groups already in place.
The Nature Conservancy has been working on a "Mississippi Sound Working Group" that has been talking about natural resource management, sediment and habitat for this area. This group includes Alabama, MS and LA.
- Plan coastwide; try and link individual projects together to achieve regional successes.
- Share GIS data regarding environmentally sensitive areas with all local and regional agencies for application into their planning processes.
- Consider options that will have benefits outside the defined scope as valuable



For instance, increased water transportation and community benefits.

4. In all engineered solutions, carefully consider secondary, cumulative impacts and unintended consequences.

- In the process of flood control projects, don't exacerbate storm surge ranges.
- First, do no harm.
- Consider long term impact of manipulation to natural processes.
- Don't repeat the same mistakes of the past.
- We need to understand the long-term consequences of a short term fix.

- Review past protection or restoration projects over the last 100 years to see what really worked, what failed and why.

- Develop a parallel assessment tool to evaluate quantitatively the impacts or not of the changes we make in terms of engineering or restoration. That is did it work?
More or less, the idea is to do all the in a hurry but we have no idea what the results will be in 20 years. Don't neglect long-term assessments. We need to be able to evaluate in 20 years if the recommendations were actually good ideas.

- Manipulation of ecosystems can be ineffective or damaging without strong scientific or technical justification.

5. Keep in mind the economic impact and benefit of projects

- Structural solutions must be sustainable at relatively low cost.
- Consider long-term economic impact and benefits from projects.
- Consider not using low bids as only selection tool for implementation. Use quality.
- Smaller, quicker projects should not be the only fund-only alternatives.
- Consider project ideas as funding-only where it would be more time-effective to implement projects through local entities than through federal levels.

- *Cost/benefit and nationally developed economic plans are mandates*
- *We don't have to follow National Economic Directives; simple cost-effectiveness will be an adequate justification.*

6. In all cases consider CONSISTENCY with existing Clean Water and Clean Air Acts.

7. Consider endangered species.

8. Minimize red tape; facilitate rapid government processes that move projects to fruition.

- Let cities be able to contract projects without a lot of red tape.
Counties were getting work completed then had to stop because governmental red tape.

10. Be realistic.

We can not protect all of the public's chosen exposure (location near shoreline) to storm events. Camille was a 100-year storm, Katrina was a 400-year storm. There is a 1000-year storm out there with our name on it.

- Assume that Katrina will happen again.
Take advantage of the "lessons learned" during the recent disaster. What kind of information/communication systems would be useful in early warning/evacuation efforts? What data would be useful during the storm to understand severity and begin planning post-storm response?

- Katrina consisted of a major surge event, but don't lose sight of flooding associated with torrential rain events.

11. Assure connectivity of natural systems.

- Avoid adverse effects to natural sediment transport pathways, i.e., don't cut them off through engineering.
- Big natural sites are important, but not the only solutions. Habitats need to be connected that allow fish and wildlife populations to move between them.
- Consider contiguous nonfragmented natural area for wildlife and providing easier fire management in coastal systems.
- Increase the connectivity between natural areas for wildlife and hydrology movements
- Include connectivity of natural areas for hydrology, fires.
- When designing natural restoration sites coastwide we need to make sure to integrate tidal creeks (increased marsh edge) which will lead to a more productive site.
- Do not allow open-water projects (breakwaters, beach or island expansion, etc.) to impact valuable habitats (SAV's, oyster reefs, EFH) or to impede species movement.

12. Expand beaches to provide surge protection.

13. Apply restoration or protection that is science based and guided by adaptive management.

14. Protect significant archaeological sites.

- Minimize impacts to cultural resources such as shell middens in marshes, and other archaeological sites such as mound and village sites.
- Consider designated uses of waters for historical uses. Determine areas of high probability for archaeological resources and incorporate these areas into planning.
- Before planning is completed, sufficient consideration needs to be given to the protection of cultural resources, especially archaeological resources that may be better protected in the long term through the restoration of marsh areas and erosion control.

15. Consider tourism and recreation.

16. Consider projects to protect public infrastructure such as water, sewer, drainage, and transportation systems from storm surge and sedimentation damages

- Consider effects of sea level rise on existing land and infrastructure AS WELL AS effects of planned solutions.

17. Concrete materials should be utilized where possible for beneficial use such as cultch material for oyster reefs or essential fish habitat

Does this include recycled material? Yes

18. Minimize new footprint

19. Buy out areas that tend toward flooding.

- Brutal as it is, shouldn't we consider whether homes should be rebuilt where ENTIRE developments (built in fragile areas) were destroyed?



20. Ensure proper funding for stewardship with mitigation.

21. Severely limit rebuilding along the coast

- Restrict new casinos to inland/upland low-quality sites.

22. If utilizing offshore breakwaters, consider more natural or beneficial structures, e.g., fish pyramids, oyster racks, etc.

23. More emphasis on Beneficial Use of Dredged Material to provide for more marsh restoration opportunities.

24. For all industrial ports throughout the coast, keep only the truly water dependent functions at the port.

Stage and store cargo, stores, supplies, trucks/trailers away from the threat of storm surge.

25. Minimize occurrence and proliferation of invasive species at project sites and maximize eradication of invasive species

Additional Comments & Questions

- Who is looking over FEMA's shoulder as they set new Base Flood Elevations?
- Considering hardening any waterway is absolutely the wrong short term thing to do. Look at LA and the MS River relatively to loss of wetlands and reduced sediments and nutrients to the downstream marsh.
- Armour - seawalls, water control gates, offshore breakwaters are terrible ideas! Are we armoring instead of zoning land use?
- Don't leave the Programmatic EIS on the shelf!

Structural Alternatives

Coastwide Ideas & Comments

Following is a merged list where similar ideas have been grouped under a common banner. All bulleted comments were entered by workshop participants. Discussion themes that were added by the workshop facilitators are indicated in italics.

The list of planning principles appears in the order workshop participants entered them, not in any order of priority.

1. Aggressively pursue the restoration of the barrier islands.

- Include the Chandeleurs
- Define barrier island restoration within context of plan.
- Protect barrier islands through public education, i.e. boater education to protect grassbeds.
- Include carefully designed recreation and educational facilities (minimal structures) on the barrier islands to raise public awareness and public support for restoration and maintenance efforts.

- Is it too late or not "visible enough" to concentrate efforts on barrier islands wetland restoration? In other words, these barrier islands are considered the first line of defense, without them, damage is facilitated. Mississippi has barrier island opportunities. How can we enhance these islands from a fish and wildlife standpoint, while at the same time strengthen their ability to protect. Would this be considered a short or long term project?

2. Use selected levels of rip rap instead of a bulkhead if erosion protection is the problem.

This should reduce the negative impact to the marsh edge habitat and allow some limited development.

3. Build new marshes in low-use beach areas coast-wide.

- Remove, not rebuild, structures along the coast and replace with marshes.
- Protect all existing and created wetlands, in perpetuity
- Limit construction along beachfronts - replace with marsh and natural areas.

- Consider changing our policy on wetlands mitigation the way that a county in south Florida did. The county itself required that if wetlands were impacted in its county they were mitigated for with wetlands in its county as opposed to further inland. Currently, the trend is to impact wetlands along the coast and mitigate with wetlands in counties to the north where land is cheap. The end result is that we are having a tremendous net loss of wetlands where they most significantly serve as flood water retention (along the coast).

4. Create staging areas to stockpile concrete debris for reef development.

- Concrete Staging areas should be water accessible near industrial canal.
- Utilize concrete from highway90 bridges for reef development.

5. 100 acres of oyster reef restoration in different places around Mississippi Sound.

The Nature Conservancy has demonstration sites working with DMR and others. These sites would or could be spread across different bays along the MS coast which would help mitigate or storm surge, wave energy and provide habitat for fish and other biodiversity.

- All along the Intercoastal waterway, provide live barriers to wave energy using oyster reefs and marshland creation behind them to ensure these natural (man-made natural structures) will be a line of defense against storm surge and wave energy therefore providing mitigation and abatement against shoreline erosion.



- The Nature Conservancy is working on demonstration sites in the sound together with DMR. These projects would be spread across the entire sound to help mitigate storm surge, reduce coastal erosion and provide natural habitat for both shellfish as well as fish (recreational, commercial and otherwise).

6. Along coastal Harrison County, buy out all land between the railroad and the beach and turn it into marsh.

7. Voluntary buy-out of previously undeveloped areas but are prone to flood (prevent future development in wetland areas).

8. Work with state of MS to authorize transfer of development rights in state statutes.

9. Include repair standards in building codes.
(e.g. replacement of electrical wiring flooded by salt water).

10. Provide access to existing public marine industry.

11. Continue land acquisition strategies to establish inland
(flooded forests, coastal forests and coastal marshlands) natural protection without having development be put at risk by large storms because they are in flood designated lands as well as provide habitat for land and coastal biodiversity.

12. Dredging, drainage way clearing, sandbeach restoration at Bell Fountaine Beach, Ocean Springs Front and East Beach, Pascagoula Beach, bulk heading at these locations to prevent erosion, marsh restoration and development, seawalls increased in height---Jackson County

13. Rebuild sand dunes along Highway 90.

14. Help plan traffic for next evacuations for whole region.
The Hwy 49 & 59 intersection is ANOTHER train wreck waiting to happen.

15. As beaches and roads along beaches are restored, consider alternatives for storm water treatment and possible reduction of direct pipe discharges.

16. If temporary ferry service is developed, consideration should be given for permanent are (sea wall, parking, dock) on each shore for multiple protection/recreational uses.

17. Utilize casinos as offshore, deepwater breakwater structures

18. Water quality improvement projects such as marina pump out stations and barrier island comfort stations to improve sanitary conditions

19. Dredge access channels to existing public marine industry and recreational boating.

20. Pipeline canal should be restored to marsh.

21. MDOT needs to reconsider larger bridges in horizontal alignment with storm surges (i.e. Biloxi Ocean springs bridge).

22. Form a monitoring team among the federal agencies (COE, NOAA, USGS, etc.) to design a storm hardened network of sites that will survive and function throughout a major storm to provide data that is critical to emergency managers (surge elevation, wind speed, rainfall, etc.).

Study Recommendations

- Study the causes of dune blowouts on barrier islands.
- Study infrastructure impacts from ABFE effects, i.e. fire protection pressures for taller buildings, exposed sewer service and gas lines to residential structures, public facilities and ADA accessibility, vehicle-accesses buildings, etc.
- **Long term sediment dynamics study for the entire MS sound**
Understand how the sediment moves around and therefore provide a long-term comprehensive understanding of barrier island dynamics (erosion and accretion) as well as marsh restoration and heath along the shoreline.

Additional Comments & Ideas

- We need a definitive report of what happened, where and why in Katrina.
What Category storm hit and where? What was surge and where? What were tides and where? What were wind speeds and where? How much rainfall? How accurate were predictions? Why the disconnect between category rating and obvious impact/risks to humans? And what is being done about it?

Establish the time sequence of wind and surge.
- Channelizing and hardening waterways only adds to flooding, not reduces it. Deepening channels allows more water to move inland faster than prior to channelization.
- An early reaction to an approaching storm can save lives and property. Evaluate the science needs for storm severity estimation and storm surge modeling and adequately fund the efforts to improve the science that will improve our readiness for future events.
- Creating reservoirs is wrong. Part of what makes our systems productive is freshwater input and flooding. In the long term we will severely impact our wonderful coastal system by believing these modifications are good for the environment. It probably is also not good for humans as well.
- Currently, flooding along some rivers consistently exceeds the 100 year flood elevations. This happens during typical spring rain events. Reservoirs or detention ponds will not eliminate flooding, only reduce that flooding to levels prior to recent development.
- Existing Hurricane categories (Cat. 1-5) are not good indicators of storm severity and were the cause of a lot of decisions to ride out Katrina ("We were OK during Camille and it was a Cat 5. This is only a 4 so we'll be fine.") Develop a method to define the strength of a storm that the public can understand and base decisions on. Life and property loss will be reduced significantly.



Jackson County Ideas and Comments

1. Work on barrier island restoration to provide the first line of defense.

A great opportunity to work with a broad partnership to restore tidal marsh at Bennett Bayou - lower Pascagoula River - provide wetland function in a highly visible project area for public education and promote the Gov's Restoration Initiative. Property owned by Land Trust for MS coastal plain site of proposed Audubon nature center and adjacent to MS coastal preserves

2. Develop additional offshore breakwaters or sand dunes where determined most beneficial through modeling.

3. Review historical erosion and capacity issues at main drainage systems to determine where improvements are most necessary and will decrease future erosion and/or failure issues.

4. Improve comprehensive retention/detention systems in each entity to reduce rainfall-related flooding.

5. Implement a barrier or check valve system to isolate freshwater detention from saltwater inundation during surge events.

6. Consider addition of wetlands along main drainage systems in each location to increase capacity of the systems during rainfall and surge flooding events.

7. Complete snagging/clearing, etc. to restore the capacity of existing drainage.

8. Repair existing bulkheads or other structural drainage components that were damaged during the storm to reduce future failures during similar events.

9. Improve the seawall system along the County, through additional seawall construction, boardwalks, beach construction, marsh construction, or a combination of these elements.

10. Consider brown water system to minimize demand on ground and surface waters and limit saltwater intrusion.

11. Re-establish benchmark information County-wide to use in planning and implementation of any ideas. Many were destroyed in the storm.

12. Relocate wastewater treatment facilities out of the surge-prone areas.

13. Perform inspection and rehabilitation of wastewater and storm water piping systems to determine unseen effects of the surge and minimize cave-ins in the future due to surge or rainfall flooding.

14. Gautier – Improve natural drainage ways (siltation removal, etc.) in the Fishhawk, Meadowdale, Longwood and Bayou Castelle area draining into Bayou Castelle.

15. Provide an incentive for replacing failing septic systems in rural areas to improve water quality along bayous and bays.

16. Gautier -- Improve natural drainage ways (siltation removal, etc.) in the Laville Subdivision and Westgate Subdivision draining into Sioux Bayou.

17. City of Gautier Storm Damage Reduction Projects.

Action Projects (near term application) include citywide storm drainage system - outlet siltation.



The effectiveness of outlet channels has been adversely impacted by siltation and immediate enhancement of the drainage system is necessary.

Identified Bayou Outlets on the Mississippi Sound that require immediate actions to remove deposited siltation:

- Unnamed Bayou (located at the southern end of Ladnier Road)
- Seacliffe Bayou (immediately east of Seacliffe Drive)
- Unnamed Bayou (south of Hiram Drive)
- Graveline Bayou (western end of Graveline Road)
- Citywide Storm Drainage System inland checkpoints
- MS 57 at C Byrd Road
- Old Spanish Trail at the CSX Railroad Overpass
- Bayou St. Pierre at US 90 (vicinity of Sutter Road)
- MS 57 in the area between US 90 and Brown Road
- US 90 approximately 0.8 mile east of MS 57
- Bayou Lamotte at US 90 (between Shamrock Court and Lanier Road)

Study Projects (Future Application)

- Citywide storm drainage system
- Wetland ecosystem restoration or creation
- West Pascagoula River siltation mitigation
- Mississippi Sound siltation mitigation
- Storm surge/wave action damage mitigation

18. Snagging drainages is also a fallacy.

Ask anyone in northern MS about the frequency of floods after snags have been removed. We just never learn from real-world experiences!

19. Gautier -- Improve natural drainage ways (siltation removal, etc.) in Northwood Hills, Rolling Meadows and Bayou Oaks subdivisions draining into Mary Walker Bayou.

20. Dredge Davis & Simmions Bayous to include all connecting bayous to help prevent flooding.

21. Rebuild Marsh Island and enlarge it.

22. Divert water from Escatawpa River into Bayou Cumbest to restore freshwater flow to the bayou and improve water quality.



Harrison County Ideas & Comments

1. Provide protection of public infrastructure from flooding, surges and sedimentation.
2. Deer Island - beach renourishment on southern side of the Island.
3. Beach restoration and the creation of green spaces. Go through the buy-out program to allow for regeneration of the natural ecosystems. Enhance protection of existing ecosystem around Turkey Creek and other natural areas.
4. Deer island - Cap exposed shell middens on the western end of the island.
5. Possibly add height to the existing beach elevation and redevelop lost dune vegetation.
6. Rebuild the Harrison County boardwalk with concrete to accommodate pedestrians, BICYCLES, and possibly street vendors.
7. Provide inland marine vessel storm shelter location with adequate moorings.
8. Flood-proof low lying sewer treatment plants. Lift stations and wells and their electrical and electronic controls.
9. Construct reservoir or detention system to provide storage for rain events to reduce or prevent flooding along coastal rivers.

Hancock County Ideas & Comments

1. Open the east Pearl River channel so it can be used by commercial marine traffic from Port Bienville, thereby avoiding traversing the Little Lake and Rigolets route.
2. Pursue the development of additional breakwater structures in low-use areas.
3. Stop the Shoreline Park extensions into Juncus madness!
 - I strongly concur with comment above regarding development into marshes. The County and City needs stronger zoning ordinances that will prohibit development in the marsh areas of the County.
4. Marsh restoration where feasible. This can be done in conjunction with private and government dredging projects. It will provide for enhanced fish and wildlife habitat.
5. Partnership efforts with Louisiana to restore enhance LA. Marsh island areas that would mitigate surge.
6. Government buy private lands in areas adjacent to marsh habitats, where homes/structures were destroyed. This would be great, particularly in cases where the land was previously marsh/wetlands and was developed, the development was destroyed and the private land owners do not want to rebuild. This would prevent future development in these areas, as well as provide for an opportunity to restore the land to marsh/wetlands.
7. The pipeline canal in Hancock Co. should be restored to marsh to improve water quality and act as a buffer.



Discussion Notes

Can we get minutes from these proceedings?

Yes, they'll be posted on the COE website, as well as group inputs and power points as quickly as possible. We will email copies to registered attendees Monday.

We should consider smaller projects as 'fund only' option" Let's just do it and give someone the money and do it on projects that have been in the works for a period of time already. (Gautier City Council)

Are you going to do any liaisons with media to inform public of workshops?

YES. It's too little for the first meeting next week but much more for the more important, more refined, later meetings. We will go to the preeminent websites to notify general audience through their newsletters and broadcasts. We will try to get buttons installed on their sites linking them to meeting information. Newspapers are not ideal.

The other thing that would be helpful, is if cities and counties have places of worship or community centers. Please, everybody, communicate with members of these organizations so they can share the word with their other members. Every one of us should try to push stuff out to get as many people as possible to attend our public comment sessions.

There has already been one newspaper release on this. Otherwise we must contact TV and papers to inform their audiences. Citizens are far more likely to respond to local recommendations than the Corps. .

Please continue to post your comments and contact the COE team! This is a unique opportunity for the Corps and for coastal Mississippi.



Mississippi Coastal Improvement Project

Potential Projects List (as of April 7, 2006)

Workshop Generated Coastal-wide Project List

The numbers on each potential project list correspond to those on the reference maps used at the Workshop.

Buy-out and restore areas which were wetlands or existing wetlands

Maximize Beneficial Use of Dredge Materials

Study, plan, and combat invasive species on barrier islands

Consider all archaeological sites in planning process

Many significant coastal sites are eroding and need to be preserved. Once they're gone, they're gone. These are nonrenewable resources which are very important to our state's history. (Contact MDAH)

Maintain Sensitivity to Barrier Islands

Be aware that most barrier islands off of the MS coastline are protected through their inclusion as a national park. Some are also designated as wilderness areas. As such, any proposed projects need to be sensitive to these special, congressionally approved designations.

Remove Hazardous Materials around Barrier Islands

Survey amount of underwater debris and remove around barrier islands; remove large and hazardous debris over next 6-24 months from shoreline on barrier islands

Develop Baseline Flora Fauna Studies for Barrier Islands

Scientific survey the natural resources (biological) to have a baseline of flora and fauna on barrier islands

Protect Barrier Islands from Spills

Protect the island resources from potential diesel/oil spills that could be caused during a large storm event – provide alternative energy sources – (solar) for government/concession facilities

Ensure Sand Mining does not Impact Barrier Islands

Study sediment transport pathways before any sand mining occurs. Avoid sand mining from within the littoral zone of all barrier islands. Avoid any projects/sand mining that would disrupt or otherwise alter natural processes/dynamics associated with known sediment transport pathways.

Indicate Barrier Islands as Protected on All Project Maps

On all maps/figures/imagery developed for the project involving the barrier islands, indicate their designation/boundaries as NPS and wilderness areas, as applicable.

Coastal-wide Project List submitted to COE before the Regional Coordination Workshops

53 Coastal Mississippi Artificial Reef Project for Remediation of 2005 Hurricane Damage
HSD, Sub-surface Erosion, F&W Habitat Degradation; Measures: Artificial Reef construction, repair of damaged existing reefs, fill emplacement for protection of reefs.

38 Coastal Mississippi Hurricane Evacuation Plan



Problem: Lack of adequate roadway capacity, lack of south-to-north evacuation routes, lack of signage, lack of hurricane effects and response training and education; Measures: Implementation of existing evacuation plan, installation of signage, educational outreach, construction of south-to-north routes.

Hancock County Project List submitted at Regional Coordination Workshops

B Ecosystem restoration for magnolia branch

Use conservation easements to restore magnolia branch.

C Jordan River Shores

Buy out landowners, return hydrology, begin mitigation, prohibit new/more development.

D Pearlington

Buy-out homeowners and return hydrology.

E Shoreline buyout

See shoreline park buyout plan.

F Biloxi Marshes Comprehensive Ecosystem Restoration

Restore marsh for pipeline canal. Will help clean out water and serve as storm buffer.
(See Previously Submitted Project 46)



Hancock County Project List submitted to COE before the Regional Coordination Workshops

63 White's Road Evacuation Route Protection

63 A White's Road Evacuation Route Protection

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection

63 B White's Road Evacuation Route Protection

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

19 Jackson Wetland Restoration

HSD, Erosion, flood inundation, and saltwater intrusion; Measures: may require watershed approach toward solution of HSD, flooding, saltwater intrusion, ecosystem damage.

42 Lakeshore Beach Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation; Measures: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marsh, plantings

15 Clermont Harbor Seawall HSDR and Erosion Control

HSD, Erosion to shoreline, utilities and highway evac route; 3 alternatives already developed, include relocation of highway, replacement of seawall, erosion protection, *current Sec 14*.

15A Cowand Point Seawall Erosion Control

HSD to seawall; *currently certified project*; Measures: approx 550' of seawall installation for erosion and HSD protection, plus *additional measures further south TBD as #15AA; current Sec 14*.

15G Hancock County Beach Ecosystem Restoration and HSDR

HSD, Erosion to shoreline, utilities and highway evac route; 3 alternatives already developed, include relocation of highway, replacement of seawall, erosion protection, *current Sec 14*.

15H Clermont Harbor Seawall HSDR and Erosion Control

HSD, Erosion to shoreline, utilities and highway evac route; 3 alternatives already developed, include relocation of highway, replacement of seawall, erosion protection, *current Sec 14*.

18 Hancock County Comprehensive

HSD and Erosion of beach, seawall, and road raising and/or repair; sand placement,

39 Bayou Caddy Shore Protection and Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation; Measures: Fill and protective measures emplacement, emplacement of suitable marsh substrate, topographic contouring and plantings; *potential Section 204 project; permit in place for placement of rubble*.

40 St. Louis Bay Comprehensive Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion and/or contamination; Measures: Beach fill emplacement, removal of damaged canal works, removal of destroyed road and roadbed, sediment removal from marshes, plantings, incidental flood control by improvement of storage opportunities, freshwater mgmt strategies for enhanced saltwater control in these estuarine environments (elements: Bayou St. Croix, Jourdan River Marsh, Mulatto Bayou, Discovery Bay, Henderson Road).



61 Clermont Lake Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion and/or contamination; Measures: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marshes, plantings, flood damage reduction by natural storage within marshes, freshwater mgmt strategies for enhanced saltwater control in estuarine environments

62 Hancock County Communities Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction



Jackson County Project List Submitted at Regional Coordination Workshops

A C. Byrd Rd Drainage

Fix undersize culverts.

(See Previously Submitted Projects 64A&B.)

B Restore natural drainage ways upper Bayou Castelle (vic Fishhawk Rd, Meadow Dale Dr., Longwod Dr, and Bayou Castelle Dr)

C Restore natural drainage ways upper Sioux Bayou (vic Laville Subdivision and Westgate Subdivision)

D Restore natural drainage ways upper Mary Walker Bayou (vic Northwood Hills, Rolling Meadows, and Bayou Oaks subdivisions)

E Robert Hiram Bridge (Gautier)

Hurricane evacuation route. Wet lands restoration drainage

F Graveline Rd Bridge at Shepard St Park (County)

Hurricane evacuation route. Wetlands restoration drainage

G W River Delta restoration (County)

Bulkhead western channel. Beneficial use. Wave protection for subdivisions.

J W Land Lake Pascagoula

Dredge to recover retention qualities and install new drainage pipes to north.

K New Drainage Channel West Side of Martin Rd Bridge

L 11th St Bridge and Drainage Canal

Bridge is failing and canal walls are caving in.

M Old Mobile Hwy Bridge Failing

Part of MAIN drainage from hospital to open water.

N Bartlett St Bridge

Bridge has collapsed and is closed (located below Old Mobile Hwy Bridge and on same canal).

O Bates St Drainage to Open Water

P Inspection & Rehabilitation of Sewer and Storm Piping

Particularly where ground was saturated and possibly compromised.

Q Relocate Waste Water Treatment Plant Out of Surge Inundation Area

R Reestablish Benchmarks City-wide

S Brown Water system study City-wide)

T Seawall/Bulkhead

Boardwalk, beach, and marsh addition along Pascagoula front beach

U 11th St. Bulkhead Rehabilitation



V Bayon Chico Bulkhead Rehabilitation

(See Previously Submitted Project 11B)

W Snag/dredge main Drainage Systems

Increase flooding capacity (flow capacity during rainfall events)

X Main drainage system erosion rehabilitation & capacity

Y Main drainage side storage wetland construction

Z City-wide retention/detention pond addition

Main drain barrier valve system addition.

AA Offshore breakwater/dunes/reefs/marshes to dissipate wave energy

BB Round Island Lighthouse Relocation

(See Previously Submitted Project 57)

HH Bennett Bayou tidal marsh restoration

II Beach Restoration

Dunes, grasses, trees, with intermittent pockets of sand beach

JJ Ladnir Rd

(See Previously Submitted Project 66B)

KK Study

(See Previously Submitted Project 58)

LL Drainage

Undersized culvert.

(See Previously Submitted Project 65)

MM Franklin Creek – pecan hydrology project

(See Previously Submitted Project 22)



Jackson County Project List submitted to COE before the Regional Coordination Workshops

49A No description on list

49 Biloxi Back Bay Watershed

No description on list.

2 West End Landing Coastal Erosion

HSD, Erosion; Seawall damaged; **Measures:** Seawall repair; fill placement; protection of bridge abutment(s).

3 Front Beach Blvd. Ecosystem Restoration and Erosion Control

HSD, Erosion (Hwy 90 Bridge to Harbor - eroded beach) interior drainage outfalls damaged; **Measures:** Restoration of beach shoreline; raising of seawall?; other erosion control.

4 Front Beach Road Wetlands

HSD, F&W Habitat Degradation; **Measures:** Wetland restoration; excavate and remove deposited sediment, clean out culvert(s), address interior drainage issues, plantings, incidental flood control benefits.

5 Shearwater Bridge Erosion Control

HSD, Erosion, Bridge abutment damage; **Measures:** Erosion control; abutment protection; potential HSDR for evac route; **potential Sec 14;** less than 500K est. cost; other than bridge, there may be little other damageable property.

5B Jackson County Marsh Outlet Ecosystem Restoration

HSD to outlet of marsh; **Measures:** Removal of fill, debris and fill removal, removal of bulkhead (may require land purchase), saltwater wetland restoration plantings.

6 East Beach Road Ecosystem Restoration

HSD, Beach erosion and outfall damage, interior flooding; **Measures:** Beach fill placement; outfall repair; potential offshore submerged breakwaters TBD.

54 Davis Bayou Ecosystem Restoration

HSD, F&W Habitat Degradation, silt deposition; **Measures:** Silt removal from marsh, filling of now-useless ditches, topographic re-contouring, plantings.

34 Monster Ditch/Ocean Springs Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

7 Belle Fontaine Marsh

HSD, Storm damage to marsh; **Measures:** Sediment removal, topographic modification, plantings, potential for offshore submerged breakwater.

64 Upper Old Fort Bayou Comprehensive Flood Damage

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

64A Upper Old Fort Bayou Comprehensive Flood Damage Reduction



HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

64B Upper Old Fort Bayou Comprehensive Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

65B Old Spanish Trail Comprehensive Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

65A Old Spanish Trail Comprehensive Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

65 Old Spanish Trail Comprehensive Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route

66 Gautier Hurricane Storm Damage Reduction and Ecosystem Restoration

HSD and sediment infilling of existing drainageways and bayou outlet; Measures: potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

66A Gautier Hurricane Storm Damage Reduction and Ecosystem Restoration

HSD and sediment infilling of existing drainageways and bayou outlet; Measures: potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

66B Gautier Hurricane Storm Damage Reduction and Ecosystem Restoration

HSD and sediment infilling of existing drainageways and bayou outlet; Measures: potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

58 West Pascagoula Delta Flood Damage Reduction and Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion and/or contamination; Measures: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marshes, plantings, flood damage reduction by natural storage within marshes, freshwater mgmt strategies for enhanced saltwater control in estuarine environments.

9 Pascagoula Beach Blvd. Restoration

Beach Park Storm Damage Reduction, Bayou Chico Beach HSDR, Pascagoula Breakwater HSDR. HSD, Erosion, Seawall and road damage, seawall failure, damage to town; Seawall repair, potential dune restoration, beach fill to original profile. Beach fill emplacement to original profile, potential burial of seawall for additional protection. HSD, Erosion, Storm damage to shoreline and offshore resources; Measures: potential offshore submerged breakwater installation, coastal erosion control measures;

11 Beach Boulevard Erosion Control

HSD, Erosion, Storm-caused failure of bulkhead, road damage, severance of evacuation route, threats to bridge; **Measures:** bulkhead replacement, bridge abutment repair; **potential Sec 14.**

56 Greenwood Island Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation; Measures: Temporary containment for fill, emplaced fill, repair of damaged habitat caused by 2005 events, plantings.



32 Chicot Road Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

37 Upper Bayou Cassotte Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction; **Combination of 31, 33, and 35.**

36 West Bayou/Rhodes Bayou Flood Damage Reduction

HSD and sediment infilling of existing drainageways and drains; potential sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

22 Franklin Creek Floodplain Restoration

HSD, Erosion, flood inundation, and saltwater intrusion; Measures: may require watershed approach toward solution of HSD, flooding, saltwater intrusion, ecosystem damage.

55 Grand Batture Island Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion; Measures: Temporary containment for fill, emplaced fill, repair of damaged habitat caused by 2005 events, plantings. Elements: Grand Bay, Port aux Chens



Harrison County Project List submitted to COE at the Regional Coordination Workshops

A West Ship Island

Continue to nourish the north shore of the island east and in front of Fort Massachusetts, a national historic site. We've been doing this for years, dredging to re-nourish.

B Evaluate Dredging and Channelization

Look at the channeling/dredging when preparing flood controls from rain events to consider impact for storm surge in coastal zone.

C Extend South Side of Deer Island

Extend 200 yards to repair breach in island and restore original footprint of island. The restoration of the beach would help contain a breach on the southern side of the island that is right now connected to grand bayou and the danger is that the island may be split into with the occurrence of a new storm.

D Deer Island Enhancements

Cap shell middens on western side of the island and restore top soil in maritime live oak forest

E New Sewage Treatment Plant in Woolmarket Lagoon Area

Move the Woolmarket Lagoon to north of I10 north of the area and would protect the citizens by moving the sewage from the flood prone areas: new sewage treatment plant.

F Flood-proof Existing Infrastructure

Flood proof existing infrastructure, prevent damage from flooding storm surge or retrofitting existing stations with bypass pumps so the stations could be linked by existing pumps in the event of another catastrophe. Improvements to all the public infrastructure systems (water, power, drainage, roads) to prevent damages due to flooding, storm surge, and sedimentation.

G Enhance Lee and Bayview Docks for Commercial Shrimpers

Lighthouse fishing docks are important to shrimp industry. Make commercial fishing dock at Lee and Bayview more usable. Core of eng cannot give help legally help because city of Biloxi owns them. They put silt into canals. We need it dredged out to keep afloat the industry in Biloxi. Large processors were wiped out by storms. Need docks to put in fuel pumps.

H Enhance Maine Street Docks for Commercial Shrimpers

Make the commercial fishing dock on Maine street and MS 90 more usable. A small shrimping fleet is docked here and then sell shrimp off dock. These shrimpers didn't get to work since hurricane. They are depending on it for their livelihood. We need to make a place for them to sell. They have debris and dredging and that needs to be taken care of. This area is good for tourism (people come from all over to buy shrimp here). We need to have a place for these people to work or they will not be able to stay here to work another season.

I Acquire Wildlife Corridors in Lands that Repeatedly Flood

Acquire and set aside green corridors in areas that have flooded often, such as Turkey Creek in Harrison, Bay Side Park). The Land Trust would hold land in perpetuity.

J Develop Concrete Staging Center in Industrial Canal

Develop Harrison county industrial canal artificial reef staging area to stockpile concrete debris for oyster reef and other useful projects.

K Restore or Enhance Mississippi Oyster Reefs



90-95% of the reefs were destroyed by Katrina. MS had around 12,000 areas of productive reefs prior to Katrina.

L Open the bridge Quickly to Enhance Tourism.

Commercial business feels strongly that the casinos are driving coastal tourism. Get bridge open to make easier casino access.

M Rebuild the Biloxi to Ocean Springs Bridge

Transportation is a major concern. Need to make East access to commercial business easier.

N Utilizing Highway 90 Bridge as Artificial Reef Material

O Provide Compensation for Persons in Flood-prone Areas to Relocate

Areas prone to flooding, such as Eagle Point, should be offered buy-outs.

P Economic Development of Downtowns

Orderly expansion of municipal harbors along with revitalization of downtowns would provide green space; non-water dependent retail, and a manageable beach blvd. (NOT HW 90).

Q Turkey Creek: Mt. Pleasant UME Audubon site 41, Tidal Creek restoration of flood plain.

R Complete the purchase of "optional" Cat Island for inclusion into Gulf Islands Nationals Seashore



Harrison County Project List submitted to COE before the Regional Coordination Workshops

16 Pass Christian Harbor HSDR

HSD, Erosion to coffer cell walls in harbor wall; *potential FEMA fix*; removal of failed coffer cell, replacement.

14 Long Beach Harbor HSDR

HSD to rubble breakwater; *may be FEMA project*; may not have public link; Measures: replacement of missing fill and grout.

26 Turkey Creek Watershed Improvements

(May be combination of 26A and B)

26A Turkey Creek Flood Damage Reduction

HSD exacerbation to existing drainage systems; Measures: road repair, evacuation plan, signage, structure modification, flood proofing, zoning modifications, clearing and snagging, potential installation of 3-sided ring levee concept around damage centers

26B North Gulfport Interior Drainage

HSD exacerbation to existing drainage systems; Measures: road repair, evacuation plan, signage, structure modification, flood proofing, zoning modifications, clearing and snagging, potential installation of 3-sided ring levee concept around damage centers

27 Long Beach Interior Drainage HSDR (includes "Canals 2 & 3")

HSD exacerbation to existing drainage systems; Measures: road repair, evacuation plan, signage, structure modification, flood proofing, zoning modifications, clearing and snagging, potential installation of 3-sided ring levee concept around damage centers

25 Gulfport Commercial Harbor (renumbered as #25 from 15B)

HSD to Federally-authorized port project, industrial and port damage; Measures: seawall repair and/or replacement, road repair, evacuation plan, signage, structure modification, flood proofing, zoning modifications, *full scope of damages and potential measures TBD*.

20 Mississippi Coastal Urban Communities HSDR

HSD, Erosion to structures, roads, utilities, infrastructure, due to storm surge, freshwater retention by backwater effects, etc.; Measures might incorporate urban center protection by breakwaters, ring levees, offshore reefs, additional marsh restoration, barriers and gates on major waterways that enter back bays and other avenues of surge entry, seawall replacement and/or upgrading, road repair, evacuation plan, signage, structure modification, flood proofing, zoning modifications, full scope of problems and alternatives TBD.

28 Harrison County Industrial Seaway Harbor of Refuge

(Renumbered as #28 from 15C)

HSD to commercial and pleasure craft due to storm surge; measure would provide for mooring for craft during events.

50 Courthouse Road Wetlands Ecosystem Restoration and Preservation

HSD, Erosion, F&W Habitat Degradation; Measures: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marsh, plantings

15F Mississippi Coastal Pump Station Inundation Protection



HSD to pump stations throughout counties due to saltwater inundation; Measures: replacement, raising, other, of pump station equipment; *potential HUD funding through Miss Dev Auth and utility authority?*

13 Harrison County Beach Ecosystem Restoration and Erosion Control

HSD, Erosion, Beach damage due to storms; Existing FCCE Project; Measures: potential project would add dunes as ecosystem restoration and hurricane storm damage reduction measures, plantings; potential to raise wall

30 Tchoutacabuffa River Flood Damage and Watershed Improvement

HSD to existing development, marsh damage due to surge; Measures: need to examine long-term watershed measures to ensure flood damage reduction, marsh restoration and preservation, fish and wildlife preservation

24 Cedar Lake Road Flood Damage Reduction

No description found.

49 Biloxi Back Bay Watershed Management and Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion and/or contamination; Measures: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marshes, plantings, incidental flood control, freshwater mgmt strategies for enhanced saltwater control in estuarine environments; Elements: Auguste Bayou, Goat Island Marsh.

52 D'Iberville Wetlands Ecosystem Restoration (combined into #49)

HSD, Erosion, F&W Habitat Degradation; Measures: Beach fill emplacement, outfall replacement and/or repair, removal of now-useless road and roadbed, silt removal from outfalls, sediment removal from marsh, plantings

15E Highway 90 – Rodeburg to St. Charles St. HSDR and Flood Control

HSD and damage to roads, flooding of evac route; Measures: potential road raising and erosion and HSD protection TBD.

60 Mississippi Coastal Improvement and Hurricane Storm Damage Reduction Program

HSD, Erosion, F&W Habitat Degradation, Saltwater Intrusion and/or contamination; Measures: Establish Multiple Line of Defense Strategy for Hurricane Surge and Wave Damage Reduction, including Barrier Islands, Beachfront, Hwy-90, Railroad, and I-10 alignments. Also may include Bay Gate construction to protect ports and infrastructure. Measures also may include: Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marshes, plantings, flood damage reduction by natural storage within marshes, freshwater mgmt strategies for enhanced saltwater control in estuarine environments.

21 Mississippi Coastal Barrier Island Restoration

HSD, Erosion to all barrier islands due to HS surge overflow, erosion and damage to associated terrestrial and aquatic resources associated with each; Measures: may include temporary containment for sand fill, fill placement, erosion control measures saltwater intrusion prevention

51 Deer Island Ecosystem Restoration

HSD, Erosion, F&W Habitat Degradation; Measures: Temporary containment for fill, emplaced fill, repair of damaged habitat caused by 2005 events, plantings, scope TBD.

23 Biloxi Point Flood Damage Reduction

HSD, Erosion, Flooding of low areas in Biloxi by storm inundation and backwatering of interior drainage facilities; May be being dealt with by Deer Island Restoration? Full scope of problems and alternatives TBD.



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