

Mississippi Coastal Improvements Project

Potential Projects List

(as of April 26, 2006)

Note: The numbering system originally referred to potential projects on the maps with aerial photography used by the Corps during the Round One workshops. The original numbers have been retained as much as possible to avoid confusion. However, during the workshops additional items were suggested and additional numbers or letters were added where needed to capture those ideas.

This list is divided into sections by county and coast-wide. It also indicates where the potential project idea originated.

CWI. Coastal-wide Project List – Mobile District staff site visit and coordination with local communities

MSCW-36: (53) Coastal Mississippi Artificial Reef Project for Remediation of 2005 Hurricane Damage

Artificial Reef construction, repair of damaged existing reefs, fill emplacement for protection of reefs.

MSCW-37: (38) Coastal Mississippi Hurricane Evacuation Plan

Implementation of existing evacuation plan, installation of signage, educational outreach, construction of south-to-north routes.

CW II. Coastal-wide Project List – from Regional Coordination Workshop

MSCW-01: Buy-out and restore areas which were wetlands or existing wetlands

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 landowners 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.

MSCW –02: Aggressively pursue the restoration of the barrier islands.

MSCW-03: 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.

MSCW-04: 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.

MSCW-05: Provide 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.

MSCW-06: Work with state of MS to authorize transfer of development rights in state statutes.

MSCW-07: Include repair standards in building codes.

(e.g. replacement of electrical wiring flooded by salt water).

MSCW-08: Dredge access channels to existing public marine industry and recreational boating.

MSCW-09: Review drainage systems to determine historical erosion and capacity issues

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

MSCW-10: Improve comprehensive retention/detention systems in each entity to reduce rainfall-related flooding.

MSCW-11: Form a monitoring team among the federal agencies

COE, NOAA, USGS, etc. should 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.).

MSCW-12: Provide an incentive for replacing failing septic systems in rural areas to improve water quality along bayous and bays.

MSCW-13: Implement a barrier or check valve system to isolate freshwater detention from saltwater inundation during surge events.

MSCW-14: Add wetlands along main drainage systems in each location to increase capacity of the systems during rainfall and surge flooding events.

MSCW-15: Complete snagging/clearing, etc. to restore the capacity of existing drainage.

MSCW-16: Repair existing bulkheads or other structural drainage components that were damaged during the storm to reduce future failures during similar events.

MSCW-17: Maximize Beneficial Use of Dredge Materials

MSCW-18: Consider brown water system to minimize demand on ground and surface waters and limit saltwater intrusion.

MSCW-19: Re-establish Benchmark Information Coastal-wide

Use in planning and implementation of any ideas. Many points were destroyed in the storm.

MSCW-20: Relocate wastewater treatment facilities out of the surge-prone areas.

MSCW-21: Inspect and Rehabilitate Wastewater and Piping Systems

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.

MSCW-22: Develop additional Offshore Breakwaters or Sand Dunes where determined most Beneficial through Modeling

MSCW-23: Study, plan, and combat invasive species on barrier islands

MSCW-24: 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)

MSCW-25: Work on Barrier Island restoration to provide the first line of defense. 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.

MSCW-26: 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.

MSCW-27: 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

MSCW-28: 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

MSCW-29: 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.

MSCW-30: 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.

MSCW-31: 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.

MSCW-32: Partnership Efforts with Louisiana to Marsh Island Areas

This would mitigate surge.

CWIII. Coastal-wide Project List – from Public Workshops

MSCW-33: Bring barrier islands back to natural setting

MSCW-34: Allow nature to dictate wetlands vs. beach to a greater degree.

MSCW-35: Coordinate with ongoing planning efforts. Provide protection for public facility (i.e., WW treatment plants).

Hancock County Projects

HAN I. Hancock County Projects - Mobile District staff site visits and coordination with local communities

63 White's Road Evacuation Route Protection

63 A White's Road Evacuation Route Protection

Sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction, protection

63 B White's Road Evacuation Route Protection

Sediment and debris removal, drainage-way improvement, for improvement of flood conveyance and damage reduction, protection of evacuation route.

19 Jackson Wetland Restoration

Watershed approach toward solution of HSD, flooding, saltwater intrusion, ecosystem damage.

42 Lakeshore Beach Ecosystem Restoration

Beach fill emplacement, outfall replacement and/or repair, silt removal from outfalls, sediment removal from marsh, plantings Hancock County Projects - Mobile District staff site visits and coordination with local communities

15 Bay St. Louis Downtown

Seawall replacement, road repair, evacuation plan, signage, structure modification, floodproofing, zoning modifications, city has prelim design and cost estimates; FHA involvement expected; additional alternatives need to be examined; both short-term and long-term components Relocation of highway, replacement of seawall, erosion protection, current Sec 14.

15A Cowand Point Seawall Erosion Control

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

Relocation of highway, replacement of seawall, erosion protection, *current Sec 14.*

15H Clermont Harbor Seawall Hurricane Storm Damage Reduction and Erosion Control

Relocation of highway, replacement of seawall, erosion protection, *current Sec 14.*

18 Hancock County Comprehensive

Seawall, and road raising and/or repair; sand placement,

39 Bayou Caddy - Shore Protection and Ecosystem Restoration

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

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 management 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

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

Sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction

HAN II. Hancock County Projects – from Regional Coordination Workshop

HN-B Ecosystem restoration for Magnolia Branch

Use conservation easements to restore magnolia branch.

HN-C Jordan River Shores

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

HN-D Pearlinton

Buy-out homeowners and return hydrology.

HN-E Shoreline Park buyout

See Shoreline Park buyout plan. The County and City need stronger zoning ordinances that will prohibit development in the marsh areas of the County.

HN-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)

HAN III. Hancock County Projects – from Public Workshop

HNP1-01: Ferries to Temporarily Replace Bridges.

In the absence of bridges between Biloxi and Gulfport we need ferries to connect between Biloxi and Gulfport and Bay St. Louis and Pass Christian.

HNP1-02: Include all marshes in general in item 19.

HNP1-03: Would like to see the beaches restored as they were before the hurricane.

HNP1-04: Jump-start dunes. Widen beach.

HNP1-05: Bayou Caddy Area

The relentless push for intensive, high-rise condo development is on a collision course with preserving wetlands/marshes and preservation of fish and wildlife. This is a major management challenge.

HNP1-06: Filling of wetlands- Filling in the remaining marsh area in Hancock County's coast should not be allowed, particularly to enable intensive, high rise condo development.

HNP1-07 Construct a N/S rail link connecting Port Beinville Industrial Park to the Norfolk and Southern Railroad through Stennis Buffer. Hurricanes cause CSXT rail outages which cost > \$20,000/day.

HNP1-08 Restore natural freshwater flows by closing the MRGO.

HNP1-09 Remove storm debris (i.e., demolition debris carried in by surge retreat) from aquatic environments. Restore traditional shrimping and fishing areas rendered un-trawlable by storm debris.

HAN IV. Hancock County Projects - Additional Ideas from Regional Coordination Workshop

HRR1-01: 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.

HRR1-02: Pursue the development of additional breakwater structures in low-use areas.

Jackson County Project List

JAC I. Jackson County Projects – submitted before Regional Coordination Workshop

49A Merged into Project 49.

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.
(Same as Harrison County 49.)

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

Erosion control; abutment protection; potential HSDR for evac route; potential Sec 14; 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

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

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

Sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

58 West Pascagoula Delta Flood Damage Reduction and Ecosystem Restoration

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, Bayou Chico Beach, Pascagoula Breakwater, Seawall and road, 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. Potential offshore submerged breakwater installation, coastal erosion control measures.

11 Beach Boulevard Erosion Control

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

Temporary containment for fill, emplaced fill, repair of damaged habitat caused by 2005 events, plantings.

32 Chicot Road Flood Damage Reduction

Sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

37 Upper Bayou Cassotte Flood Damage Reduction

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

Sediment and debris removal, drainageway improvement, for improvement of flood conveyance and damage reduction.

22 Franklin Creek Floodplain Restoration

Watershed approach toward solution of HSD, flooding, saltwater intrusion, ecosystem damage.

55 Grand Batture Island Ecosystem Restoration

Temporary containment for fill, emplaced fill, repair of damaged habitat caused by 2005 events, plantings.
Elements: Grand Bay, Port aux Chens

JAC II. Jackson County Projects – from Regional Coordination Workshop

J-A C. Byrd Rd Drainage

Fix undersize culverts.

(See Previously Submitted Projects 64A&B.)

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

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

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

J-E Robert Hiram Bridge (Gautier)

Hurricane evacuation route. Wetlands restoration drainage

J-F Graveline Rd Bridge at Shepard St Park (County)

Hurricane evacuation route. Wetlands restoration drainage

J-G W River Delta restoration (County)

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

J-J W Land Lake Pascagoula

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

J-K New Drainage Channel West Side of Martin Rd Bridge

J-L 11th St Bridge and Drainage Canal

Bridge is failing and canal walls are caving in.

J-M Old Mobile Hwy Bridge Failing

Part of MAIN drainage from hospital to open water.

J-N Bartlett St Bridge

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

J-O Bates St Drainage to Open Water

J-P Inspection & Rehabilitation of Sewer and Storm Piping

Particularly where ground was saturated and possibly compromised.

J-Q Relocate Waste Water Treatment Plant Out of Surge Inundation Area

J-R Reestablish Benchmarks City-wide

J-S Brown Water system study City-wide)

J-T Pascagoula Beach Blvd. Restoration (boardwalk, beach, and marsh.

Boardwalk, beach, and marsh addition along Pascagoula front beach

J-U 11th St. Bulkhead Rehabilitation

J-V Bayou Chico Bulkhead Rehabilitation

(See Previously Submitted Project 11B)

J-W Snag/dredge main Drainage Systems

Increase flooding capacity (flow capacity during rainfall events)

J-X Main drainage system erosion rehabilitation & capacity

J-Y Main drainage side storage wetland construction

J-Z City-wide retention/detention pond addition

Main drain barrier valve system addition.

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

J-BB Round Island Lighthouse Relocation

(See Previously Submitted Project 57)

J-HH Bennett Bayou tidal marsh restoration

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

J-II Pascagoula Beach Restoration

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

J-JJ Ladnir Rd

(See Previously Submitted Project 66B)

J-KK West Pascagoula Delta Flood Damage Reduction and Ecosystem Restoration Study

(See Previously Submitted Project 58)

J-LL Drainage Improvements

Undersized culvert.

(See Previously Submitted Project 65)

J-MM Franklin Creek – Pecan hydrology project

(See Previously Submitted Project 22)

JAC III. Jackson County Projects – from Public Workshop

JP1-01: Ebb and flow of Intracoastal veins from the MS Sound to rebuild property with the erosion in the bayous near #66

JP1-02: Use jetties to prevent sediment flow clogging channels

JP1-03: Cedar Point/West River-Restore beaches, sand, work, sediment management in this area

JP1-04: Ecosystem restoration along Hwy 90

JP1-05: Dredge/clear area in front of beachfront outfalls

JP1-06: Hydraulic lifting boardwalk/sidewalk as component of seawall/boardwalk improvements.

JAC IV. Jackson County Projects – additional ideas from Regional Coordination Workshop (via-email)

JR1-01: Improve the Seawall System

Provide additional county-wide seawall construction, boardwalks, beach construction, marsh construction, or a combination of these elements.

JR1-02: Gautier – Improve natural drainage ways (siltation removal, etc.) in the Fishhawk, Meadowdale, Longwood and Bayou Castelle area draining into Bayou Castelle.

JR1-03: Gautier -- Improve natural drainage ways (siltation removal, etc.) in the Laville Subdivision and Westgate Subdivision draining into Sioux Bayou.

JR1-04: 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.

JR1-05: 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

JR1-06: Gautier -- Improve natural drainage ways (siltation removal, etc.) in Northwood Hills, Rolling Meadows and Bayou Oaks subdivisions draining into Mary Walker Bayou.

JR1-07: Dredge Davis & Simmons Bayous to include all connecting bayous to help prevent flooding.

JR1-08: Rebuild Marsh Island and enlarge it.

JR1-09: Divert water from Escatawpa River into Bayou Cumbest to restore freshwater flow to the bayou and improve water quality.

Harrison County Project Lists

HAR I. Harrison County Projects – Mobile District staff site visits and coordination with local communities

16 Pass Christian Harbor Hurricane Storm Damage Reduction

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

Road repair, evacuation plan, signage, structure modification, floodproofing, zoning modifications, clearing and snagging, potential installation of 3-sided ring levee concept around damage centers

26B North Gulfport Interior Drainage

Road repair, evacuation plan, signage, structure modification, floodproofing, 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)

Road repair, evacuation plan, signage, structure modification, floodproofing, 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*)

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

May 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, floodproofing, 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

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 - 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

Existing FCCE Project. 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

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

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*)

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

Potential road raising and erosion and HSD protection TBD.

60 Mississippi Coastal Improvement and Hurricane Storm Damage Reduction Program

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. Temporary containment for sand fill, fill placement, erosion control measures saltwater intrusion prevention

51 Deer Island Ecosystem Restoration

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.

HAR II. Harrison County Projects – from Regional Coordination Workshop

HR-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.

HR-B Evaluate Dredging and Channelization

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

HR-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.

HR-D Deer Island Enhancements

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

HR-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.

HR-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.

HR-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.

HR-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 haven't been able 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. We need to have a place for these people to work.

HR-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.

HR-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.

HR-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.

HR-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.

HR-M Rebuild the Biloxi to Ocean Springs Bridge

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

HR-N Utilize Highway 90 Bridge as Artificial Reef Material

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

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

HR-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).

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

HR-R Complete the purchase of “optional” Cat Island for inclusion into Gulf Islands Nationals Seashore

HAR III. Harrison County Projects – from Public Workshop

HRP1-01: Retention/Detention basin to hold runoff while waiting for surge to go down from Brickyard Bayou.

HRP1-02: Surge gates along Biloxi Bay to help ease drainage areas during storm events

HRP1-03: Wiers (low level dams) within estuaries to control water flow

1. Keep water in middle of channel
2. Self cleaning and fast moving and keep mud flats covered.
3. Shore line for maintenance and walking paths

HRP1-04: Purchase riparian buffers. Purchase wetlands. Manage barrier islands.

HRP1-05: Reconsider dioxin cleanup on navy base post Katrina.

HRP1-06: Consider Long Beach interior drainage HSDR (includes canal 2-3).

HRP1-07: Reduce toxic exposure which exacerbates storm damage – Dioxin, Creosote, Titanium Dioxide, Gypsum.

HRP1-08: Turkey Creek watershed greenway.

HRP1-09: Forrest Height Levee

- Restore
- Vegetate with native species
- Footbridges
- Nature trail atop

HRP1-10: Dredge shoaled channels hindering storm evacuation

HRP1-11: Dredge shoaled marinas.

HAR IV. Harrison County Projects – additional projects from Regional Coordination Workshop (via email)

HRR1-01: Provide protection of public infrastructure from flooding, surges and sedimentation.

HRR1-02: Deer Island - beach renourishment on southern side of the Island.

HRR1-03: 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.

HRR1-04: Possibly add height to the existing beach elevation and redevelop lost dune vegetation.

HRR1-05: Rebuild the Harrison County boardwalk with concrete to accommodate pedestrians, BICYCLES, and possibly street vendors.

HRR1-06: Provide inland marine vessel storm shelter location with adequate moorings.

HRR1-07: Flood-proof low-lying sewer treatment plants. Lift stations and wells and their electrical and electronic controls.

HRR1-08: Construct reservoir or detention system to provide storage for rain events to reduce or prevent flooding along coastal rivers.

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