Summary of Actions by Gulf Coast States to Address Shoreline Erosion Issues

Alabama shares the nation's Gulf Coast with the States of Florida, Mississippi, Louisiana, and Texas. Of the five states, the length of general Gulf shoreline frontage (does not include the shorelines of interior bays, sounds, and tidal streams) for Alabama and Mississippi is considerably dwarfed by that possessed by Florida, Louisiana, and Texas.

Gulf Shoreline in miles	
Florida (Gulf only)	770
Alabama	53
Mississippi	44
Louisiana	397
Texas	367
Total Gulf Coast	1,631

One would presume that the States having the smallest length of Gulf Coast shoreline would value that resource more than the States blessed with a more abundant shoreline. However, that has not been the historical case. Alabama and Mississippi have lagged behind their three neighboring states that have taken proactive actions to institutionalize within their respective state legal codes various management programs aimed at protecting, conserving, and preserving their respective coastal resources – resources that contribute to their local and statewide economies, provide protection from tropical cyclones, and add to the quality of life for both their residents and visitors.

The following highlights actions undertaken by the five Gulf Coast states relative to the management and beneficial use of dredged material to address erosion of their Gulf shorelines.

Florida

Wide and stable beaches are a major attraction for the millions of tourists that visit Florida each year and add considerable revenues to state and local budgets. The State of Florida has traditionally been the most aggressive of the five Gulf Coast states in preventing shoreline erosion of shorelines resulting from dredging of coastal inlets and/or the consequences of inlet jetties that starve downdrift beaches of sand.

Due to its gentle topography and wet climate, Florida's uplands and wetlands are drained by numerous streams that discharge into the Gulf through many tidal inlets scattered along its coast. A variety of navigation projects, some deep-draft, provide access to the sea through specific coastal inlets.

Florida early on recognized the need to assure that dredging of navigation channels through tidal inlets did not interrupt the littoral movement of sands to prevent downdrift beaches from being eroded. Florida has also been a national leader in beach nourishment and restoration projects and programs, by requiring that dredged material removed from tidal inlets be put to beneficial uses to reduce shoreline erosion.

In 1986, the Florida Legislature authorized a comprehensive beach management planning program (Section 161.101, Florida Statutes) to protect and restore the state's beaches. Under the program, the Florida Department of Environmental Regulation (FDER) evaluates beach erosion

problems throughout the state to seek viable solutions. The primary vehicle for implementing the beach management planning recommendations is the Florida Beach Management Funding Assistance Program. This program was "…established for the purpose of working in concert with local, state and federal governmental entities to achieve the protection, preservation and restoration of the coastal sandy beach resources of the state". After considering the condition of Florida's inlets (Dean and Obrien, 1986a and 1986b), the FDER prepared a series regional Strategic Beach Management Plans, including one for the Panhandle Region of the northern Gulf Coast (FDER, 2008).

The provisions of Florida's 1993 "Beach and Shore Protection Act" are contained in Chapter 161 of the Florida Statutes. The statutes provide for a variety of local government-sponsored erosion control activities. As defined by the statutes "restoration" involves the initial placement of sand to rebuild a beach that has been severely eroded. "Beach nourishment", or periodic maintenance, places sand on previously restored beaches at specific intervals based on project performance in order to maintain original design intent, such as storm protection, recreational beach area, and habitat enhancement. The complete text of Chapter 161 can be viewed at: http://www.flsenate.gov/Laws/Statutes/2012/161/.

In 2008, the Florida Legislature amended Section 161.142 (**see Figure 1**), by finding:

> "…it is in the public interest to replicate the natural drift of sand which is interrupted or altered by inlets to be replaced and for each level of government to undertake all reasonable efforts to maximize inlet sand bypassing to ensure that beach-quality sand is placed on adjacent eroding beaches. Such activities cannot make up for the historical sand deficits caused by inlets but shall be designed to balance the sediment budget of the inlet and adjacent beaches and extend the life of proximate beach-restoration projects so that periodic nourishment is needed less frequently".

Florida adopts a formal Inlet Management Plan for each inlet through which a navigation channel passes and/or at which a jetty system is located. The plans identify the management strategies to be taken to reduce erosion and to assure sand bypassing occurs. The Florida Department of Environmental Regulation (FDER) administers the plans on behalf of the State. Language contained in existing Inlet Management Plans addressing federal navigation projects typically identify the Corps and its non-federal project partners as "…the entities responsible for the extent of erosion and for measures to correct such erosion" (FDER, 1996; 1997a; 1997b; 1998; 2014a; and 2014b).

Under the program, financial assistance in an amount up to 50 percent of project costs is available to Florida's county and municipal governments, community development districts, or special taxing districts for shore protection and preservation. Eligible activities include beach restoration and nourishment activities, project design and engineering studies, environmental studies and monitoring, inlet management planning, inlet sand transfer, dune restoration and protection activities, and other beach erosion prevention related activities consistent with Florida's adopted Strategic Beach Management Plan. Since 1998, $541.6 million has been appropriated to cost-share with local governments on local and federally authorized projects, with each level of government contributing about one-third of the cost of the entire program.

161.142 Declaration of public policy relating to improved navigation inlets.—
The Legislature recognizes the need for maintaining navigation inlets to promote commercial and recreational uses of our coastal waters and their resources. The Legislature further recognizes that inlets interrupt or alter the natural drift of beach-quality sand resources, which often results in these sand resources being deposited in nearshore areas or in the inlet channel, or in the inland waterway adjacent to the inlet, instead of providing natural nourishment to the adjacent eroding beaches. Accordingly, the Legislature finds it is in the public interest to replicate the natural drift of sand which is interrupted or altered by inlets to be replaced and for each level of government to undertake all reasonable efforts to maximize inlet sand bypassing to ensure that beach-quality sand is placed on adjacent eroding beaches. Such activities cannot make up for the historical sand deficits caused by inlets but shall be designed to balance the sediment budget of the inlet and adjacent beaches and extend the life of proximate beach-restoration projects so that periodic nourishment is needed less frequently. Therefore, in furtherance of this declaration of public policy and the Legislature's intent to redirect and recommit the state's comprehensive beach management efforts to address the beach erosion caused by inlets, the department shall ensure that:
(1) All construction and maintenance dredgings of beach-quality sand are placed on the adjacent eroding beaches unless, if placed elsewhere, an equivalent quality and quantity of sand from an alternate location is placed on the adjacent eroding beaches.
(2) On an average annual basis, a quantity of beach-quality sand is placed on the adjacent eroding beaches which is equal to the natural net annual longshore sediment transport. The department shall, with the assistance of university-based or other contractual resources that it may employ or call upon, maintain a current estimate of such quantities of sand for purposes of prioritizing, planning, and permitting.
(3) Construction waterward of the coastal construction control line on downdrift coastal areas, on islands substantially created by the deposit of spoil, located within 1 mile of the centerline of navigation channels or inlets, providing access to ports listed in s. 403.021(9)(b), which suffers or has suffered erosion caused by such navigation channel maintenance or construction shall be exempt from the permitting requirements and prohibitions of s. 161.053(4) or (5); however, such construction shall comply with the applicable Florida Building Code adopted pursuant to s. 553.73. The timing and sequence of any construction activities associated with inlet management projects shall provide protection to nesting sea turtles and their hatchlings and habitats, to nesting shorebirds, and to native salt-resistant vegetation and endangered plant communities. Beach-quality sand placed on the beach as part of an inlet management project must be suitable for marine turtle nesting.
(4) The provisions of subsections (1) and (2) shall not be a requirement imposed upon ports listed in s. 403.021(9)(b); however, such ports must demonstrate reasonable effort to place beach-quality sand from construction and maintenance dredging and port-development projects on adjacent eroding beaches in accordance with port master plans approved by the Department of Economic Opportunity, and permits approved and issued by the department, to ensure compliance with this section. Ports may sponsor or cosponsor inlet management projects that are fully eligible for state cost sharing.
(5) The department shall ensure that any disposal of the beach-quality sand from federal projects in this state which involve dredging for the purpose of navigation is on, or in the nearshore area of adjacent eroding beaches. The department may consider permitting nearshore or upland disposal of such beach-quality sand if emergency conditions exist. The state recognizes that due to the growing demand for beach-quality sand resources for beach restoration and nourishment projects, the limited supply of such sand resources, and the cost of such projects, beach or nearshore sand placement is the least-cost disposal method.
(6) If federal investigations and reports or state-approved inlet management plans do not specify the entity or entities responsible for the extent of erosion caused by an inlet, the department or local government, with the assistance of university-based or other contractual resources that they may employ or call upon, is encouraged to undertake assessments that aid in specifying the responsible entity or entities and in more accurately determining cost-sharing responsibilities for measures to correct such erosion. The entity that is responsible for maintenance dredging of an inlet may be deemed responsible for the erosion caused by the inlet if another responsible party is not specified in such an assessment, a shore protection project investigation or report, or a state-approved inlet management plan.
(7) If the beneficiaries of the inlet, the local governments having jurisdiction of lands adjacent to the inlet, or the owners of property adjacent to the inlet are involved in a dispute concerning how much sand should be bypassed, the department shall protect its monetary investment in beach nourishment projects within the inlet's physical zone of influence by taking all reasonable actions to balance the sediment budget of the inlet and adjacent beaches, including implementation of inlet sand bypassing and other inlet management projects.
History.—s. 8, ch. 86-138; s. 19, ch. 87-97; s. 1, ch. 2008-242; s. 184, ch. 2010-102; s. 56, ch. 2011-142.

Figure 1. Section 161.142 of Florida Statutes (Florida State Administrative Code, 2012)

This has resulted in the restoration and subsequent maintenance of over 226.7 miles, or nearly 57%, of the state's critically eroded beaches on all of the state's coasts (FDER, 2013)).

Louisiana

The rapid loss of Louisiana's coastal wetlands is a well-publicized ongoing environmental catastrophe. Containing 37 percent of the estuarine marshes and supporting the largest commercial fishery in the continental United States, the State of Louisiana experiences about 90 percent of the nation's annual coastal wetland losses. The U.S. Geological Survey has determined coastal Louisiana lost about 1,883 square miles of land area between 1932 and 2010, representing about 25 percent of the state's total coastal land area that existed in 1932. Trend analyses from 1985 to 2010 show a wetland loss rate of 16.57 square miles per year, equating to Louisiana losing an area the size of one football field per hour (Couvillion et al, 2011).

To respond to this dire situation, the State Legislature enacted coastal management legislation in 1978 (LSA 49: 214.31 et seq.,) which created a state coastal use permitting program aimed reducing human induced impacts to the coastal zone. The program also implemented the "federal consistency' provision of the CZMA, which requires federal actions in Louisiana's coastal zone, including restoration projects, to be consistent with the state's coastal program (Wascom et al, 2005).

In 1989, the Legislature created a funded, multi-agency coastal restoration planning effort, the Coastal Wetlands and Management Authority, to plan coastal restoration projects; establish a restoration funding source; and an office of coastal activities in the Governor's office to coordinate restoration activities (Wascom et al, 2005).

The State of Louisiana has benefited heavily from the Comprehensive Wetlands Planning Protection and Restoration Act (CWPPRA) passed by Congress in 1990 that has subsequently been reauthorized through Fiscal Year 2018. The CWPPRA has allocated about $50 million to Louisiana per year and set up a federal task force to develop and facilitate coastal restoration efforts. The CWPPRA also required development of a comprehensive Louisiana coastal restoration plan. The plan, "Coast 2050: Toward a Sustainable Coastal Louisiana" was completed in 1998 by the Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority (1998). At an estimated cost of $14 billion in federal and state funding over the next 30 years, restoring Louisiana's coast will be one of the largest environmental projects ever undertaken in the United States (Wascom et al, 2005).

The state's citizens voted in 2003 to amend the Louisiana Constitution to create a Coastal Restoration Fund, which would provide the 25 percent match the State must pay to receive federal funding for restoration. Louisiana continues to actively pursue federal funding for the 30-year project. Federal officials estimate the cost of inaction would amount to more than $100 billion loss in infrastructure in the affected coastal areas. The Corps is playing a major role in implementing specific restoration projects requiring federal involvement (Wascom et al, 2005).

Following Hurricanes Katrina and Rita, in 2005, the Legislature passed Act 8 to restructure the State's Wetland Conservation and Restoration Authority to form today's Coastal Protection and

Restoration Authority (CPRA). The act expanded the membership, duties and responsibilities of the CPRA Board and charged the new Authority with developing and implementing a comprehensive coastal protection plan, including both a Master Plan that would be revised every five years and an Annual Plan of action and expenditures to be submitted to the Legislature for approval. The CPRA was also directed to consider both "hurricane protection and the protection, conservation, restoration and enhancement of coastal wetlands and barrier shorelines or reefs" and further defined the "coastal area" as the Louisiana Coastal Zone and contiguous areas that are subject to storm or tidal surge (CPRA, 2012).

In 2006, the State Legislature passed Act 297 which requires the Department of Natural Resources to submit an annual report on the status of barrier island projects and needs in the state. The CPRA submits the "barrier island status report" as part of its Annual Plan to each member of the Legislature. The act requires that the report: 1) indicate the condition of all barrier islands; 2) provide the status of all barrier island stabilization and preservation projects under construction; and 3) outline future plans for restoration and maintenance of the barrier islands and coastal passes (CPRA, 2014). Information on efforts after 2006 by the Legislature aimed at continuing to improve management of the Louisiana's coastal resources and to strengthen the CPRA can be found at: http://coastal.la.gov/about/structure/.

Texas

Of Texas' 367-miles of Gulf Coast, the Texas General Land Office (GLO) states that development pressure is focused on only 60 miles of developable shoreline (Council, 2007). The human pressure to use that limited resource, the goal of maintaining the ecological value of the undeveloped shoreline, and the economic benefits gained from a stable coast has been recognized by the Texas Legislature.

In 1999, the Legislature passed the Coastal Erosion Planning and Response Act (CEPRA). The act enabled development of the coastal erosion program in Texas. Implemented by the GLO, the CEPRA program entails a coordinated effort of state, federal, and local entities to conduct coastal erosion response projects and studies (Texas GLO, 2007). The CEPRA requires the GLO to submit a report to the Legislature every two-years that is to list:

1) Each critical erosion area
2) Each proposed erosion response study or project
3) An estimate of the cost of each proposed study or project
4) Each coastal erosion response study or project funded during the preceding biennium
5) The economic and natural resource benefits from each coastal erosion response study or project funded under the preceding biennium
6) The financial status of the account
7) An estimate of the cost of implementing this subchapter during the succeeding biennium

The act did not provide a permanent funding source, but requires the Legislature to appropriate funds on two-year cycles. Funds provided by the state under CEPRA are matched with local partner funds to build erosion response projects and to conduct studies. A variety of projects are

permitted to be pursued under CEPRA. The following identifies selected minimum match requirements for certain types of projects:

Beach Nourishment – 25%
Dune Restoration – 25%
Shore Protection – 40%
Beneficial Use of Dredged Materials – percent match depends on type of project

Funding appropriated must be encumbered and spent on projects within the two-year period in which it is appropriated, unless funding for a particular project is given "carryover" authority by the Legislature. Historically, carryover authority has been given to projects involving construction that are not anticipated to be completed within the biennium (Texas GLO, 2013). **Table 1** summarizes the CEPRA allocations through the first 14 years (or seven funding cycles) of the act's existence, showing the amounts of partner matching and the amounts of federal and other state funds that have been leveraged to accomplish the large number of projects funded under the program (Texas GLO, 2013).

Table 1. Summary of CEPRA funding allocations by Texas Legislature Cycles (Texas GLO, 2013)

Funding Cycle	No. of Projects Funded	CEPRA Funding	Partner Match	Federal Leverage	Other State/Local Leverage	Total Budget for Cycle
7 (FY12 - 13)	26	$15,256,290	$2,287,965	$39,684,330	$0	$57,228,585
6 (FY10 - 11)	28	$5,463,806	$13,090,187	$55,824,351	$0	$74,378,344
5 (FY08 - 09)	59	$17,822,687	$5,460,873	$12,866,313	$0	$36,149,873
4 (FY06 - 07)	49	$7,300,000	$2,035,616	$6,466,752	$0	$15,802,368
3 (FY04 - 05)	48	$7,320,000	$2,104,390	$12,862,988	$93,500	$22,380,878
2 (FY02 - 03)	63	$15,000,000	$5,732,233	$6,991,532	$0	$27,723,765
1 (FY00 - 01)	43	$15,000,000	$6,316,995	$6,059,267	$595,680	$27,971,942

As elsewhere, the Corps dredges a considerable amount of sediments to construct and maintain navigation inlets and channels in Texas. The State Legislature recognized the potential value of the dredged sediments to restore eroding beaches and to contribute to the development of wetland habitats, while saving the public money. In an attempt to institutionalize the beneficial use of dredged material in erosion control projects in Texas, the Legislature enacted a law in

2001 requiring "…beach-quality sand dredged in constructing and maintaining navigation inlets and channels of the state shall be placed on eroding beaches or to restore eroding wetlands wherever practicable" (Newby, 2006). The complete text of this brief Texas law, which was incorporated under Texas Natural Resource Code Sec. 33.602 (d) and Sec. 33.603 (b) (2), is highlighted in yellow in **Figure 2**.

SUBCHAPTER H. COASTAL EROSION
Sec. 33.602. COASTAL EROSION DUTIES AND AUTHORITY.

(a) The land office shall implement a program of coastal erosion avoidance, remediation, and planning. The commissioner shall ensure that erosion avoidance, remediation, and planning protect the common law rights of the public in public beaches as affirmed by Subchapter B, Chapter 61.

(d) The commissioner shall adopt rules requiring that beach-quality sand dredged in constructing and maintaining navigation inlets and channels of the state be placed on eroding beaches or to restore eroding wetlands wherever practicable.

Sec. 33.603. COASTAL EROSION STUDIES AND PROJECTS.

(a) The land office shall undertake coastal erosion studies, demonstration projects, and response projects if the land office receives legislative appropriations or other funding for that purpose. If reasonable and appropriate, the land office shall work in conjunction with other state agencies, local governments, federal agencies, including the United States Army Corps of Engineers, or other qualified project partners in undertaking those studies and projects.

(b)(2) beneficial placement of dredged material where appropriate to replenish eroded public beach, bay shore, marsh, and dune areas;

Figure 2. Texas law regarding beneficial use of dredged material to restore eroding beaches (Texas Natural Resource Code Sec. 33.602 (d) and Sec. 33.603 (b) (2))

Mississippi

It is estimated that as many as 10,000 acres of Mississippi's coastal wetlands and islands have been lost since 1950 (HCRT, 2011a and 2011b). In partial response to this loss, in 2002, the Corps, working with the Mississippi Department of Marine Resources (DMR) and other federal, state and private partners developed the "Long-Term Comprehensive Master Plan for Beneficial Uses of Dredged Material Along Coastal Mississippi" (i.e. Master Plan) to promote the use of dredged material for coastal land and habitat restoration.

Following the devastation that Hurricane Katrina wrought in coastal Mississippi, the dredged material beneficial use concept attracted additional public and agency attention which is now being enacted through a new Beneficial Users Group (BUG) formed in 2008 to help restore and protect Mississippi's critically important coastal resources. The Mississippi BUG meets monthly at DMR. The BUG is co-chaired by USACE and includes representatives of the U.S. Fish and Wildlife Service (USFWS), Environmental Protection Agency (EPA), the National Oceanographic Atmospheric Administration (NOAA)/National Marine Fisheries Services (NMFS), Mississippi Department of Environmental Quality (DEQ), the Mississippi Secretary of State, as well as staff from Senate and Congressional representatives. Representatives of local ports and other private stakeholders are also encouraged to attend.

An important success of the BUG in 2010 was to have the Mississippi Legislature enact the Beneficial Use of Dredged Material Law requiring the beneficial use of dredged material when beneficial sites are available and the material is suitable (**see Figure 3**). To help meet the intent of the law, the Mississippi BUG cooperated with the Gulf of Mexico Alliance's Habitat

§ 49-27-61. Charges for materials removed under permit; alternative for dredge material disposal.
(1) (a) The commission shall charge Fifty Cents (50¢) per cubic yard for any sand or gravel removed from wetlands and Twenty-five Cents (25¢) per cubic yard for any other materials removed from coastal wetlands by a permittee or his agent under the terms of any permit issued.

(b) There shall be no charge levied by the commission for the removal of one hundred (100) cubic yards or less of any material removed from wetlands by a permittee or his agent under the terms of any permit issued.

(c) The commission may waive these charges on any project of a governmental agency or any project wherein expenditures are made as the result of a governmental grant or governmental bond proceeds.

(d) Any party participating in the beneficial use of dredge materials programs under subsection (2) shall be exempt from these charges.

(2) The department shall require any party permitted to conduct dredging activities of over two thousand five hundred (2,500) cubic yards to participate in the department programs involving beneficial use of dredge materials, provided the material is suitable and a beneficial use site is available. If approved by the executive director, or his designee, a party may deposit acceptable dredge materials in a designated location for a fee not to exceed fifty percent (50%) of the fair market cost to transport and dispose of the material in an approved upland site. The department shall consider in-kind services for offsetting depositional charges.

Sources: Laws, 1973, ch. 385, § 11; Laws, 1988, ch. 408, § 3; Laws, 1994, ch. 578, § 46; Laws, 2005, ch. 371, § 2; Laws, 2010, ch. 412, § 1, eff from and after July 1, 2010.

Figure 3. Mississippi 2010 Beneficial Use of Dredged Material Law

Conservation and Restoration Team (HCRT) in 2011 to update the original 2002 Master Plan. The updated 2011 Master Plan provides an overview of the existing sediment transport system in Mississippi; the laws and regulations that provide the permitting structure to be followed to establish beneficial use sites; options for dredging technologies; addresses potential beneficial use projects; and identifies stakeholders. The goal of the updated Master Plan is to develop a comprehensive plan to identify areas within each of Mississippi's three coastal counties where dredged material can be placed to help restore, nourish, and enhance the coastal marshes and wetlands of Mississippi. The areas identified should also be easily accessible to multiple user types to encourage beneficial use of dredged material (HCRT, 2011; Mears and Ramseur, 2013).

With the passage of the beneficial use law in 2010, the Master Plan includes a list of potential beneficial use sites within each Mississippi coastal county. The concept behind identifying sites within each county is to provide commercial dredging companies and agencies, such as the Corps, with sites, both large and small, within coastal areas and back bays. The desire is to have beneficial use sites close to potential dredging sources so that the requirement to dispose of dredged material would not be cumbersome to private and agency dredging projects. The projects were suggested by federal, state, and local authorities as possible projects to use dredged material beneficially in coastal Mississippi. As time passes, technologies improve, and the Master Plan matures, new projects could and probably will be proposed. In addition to specific beneficial use projects, "priority areas" are identified within watershed areas and coastal preserves where land loss over time has changed the historic shoreline where dredged material could be beneficially used to restore those areas (Ramseur, et al; 2013; Ramseur, 2014).

Alabama

The Alabama Coastal Area Management Program (ACAMP) was created by the passage of the Alabama Coastal Area Act by the Alabama Legislature in 1976. That Act, and its subsequent amendment, the 1982 Alabama Environmental Management Act, provided the statuary authority

for the development and implementation of a management program that would "…promote, improve and safeguard the lands and waters located in the coastal areas of this state."

The Alabama Coastal Area Management Program (ACAMP) was approved by the State of Alabama and the Federal government in 1979. In 2000, the Alabama Coastal Area Management Program (ACAMP) was transferred from the Alabama Department of Economic and Community Affairs to the Alabama Department of Conservation and Natural Resources, where day-to-day activities are carried out by the State Lands Division's Coastal Section. Permitting and regulatory portions remain vested within the Alabama Department of Environmental Management.

The ACAMP program is implemented through a management plan. It is the goal of the ACAMP program to revise the management plan every five years as new information becomes available. The most recent update of the plan was completed in 2013, addressing the five-year period of 2013-2018. The following five Strategic Planning Goals contained in the plan are based upon specific policies stated in the original authorizing legislation for the ACAMP.

1. Protect, restore, and manage the use of coastal resources through an ecosystem approach to management.
2. Enhance and promote sustainable economic development in the coastal area.
3. Protect, restore, or enhance public access to coastal resources.
4. Reduce vulnerability to natural hazards.
5. Use local government capacity building and education and outreach activities as catalysts to increase conservation of coastal resources (Coastal Section, 2013).

Strategic Planning Goal No. 1 includes two specific objectives that are directly relevant to addressing the Dauphin Island erosion issue. The specific action items stated in the Strategic Plan for these two objectives are repeated below:

> ***Objective G:*** Continue active participation in regional habitat restoration efforts. Action Items:
>
> > **i.** Actively participate in Gulf Alliance Habitat Conservation and Restoration Team (HCRT) activities.
> >
> > **ii.** Continue to work with the HCRT to address wetlands and estuarine habitat restoration action items from the Governor's Action Plan.
> >
> > **iii.** Continue to participate in other regional habitat restoration groups, such as the Deepwater Horizon Natural Resource Damage Assessment, the Gulf Coast Ecosystem Restoration Council and other similar groups, in order to advance habitat restoration in coastal Alabama and around the Gulf.
>
> ***Objective J:*** Continue to promote Regional Sediment Management and the beneficial use of dredged materials in coastal Alabama and around the Gulf. Action Items:
>
> > **i.** Continue to actively participate in the Mobile Harbor Beneficial Use Working Group and other interagency working groups dedicated to beneficial use.
> >
> > **ii.** Continue to actively participate in the GOMA HCRT Gulf-wide Regional Sediment Management Master Plan Sub-Committee (Coastal Section, 2013).

Efforts are being made in coastal Alabama on a limited scale to beneficially use dredged material. For example, in 1987, the Corps increasingly began to place dredged material removed from the Mobile Harbor Outer Bar Channel at an offshore disposal area southeast of Dauphin Island referred to as the Sand Island Beneficial Use Area (**see Figure 4**). However, there is no evidence to indicate placement of dredged material at that location has had any measurable influence in reducing Dauphin Island's serious erosion issue, and it appears much of the placed dredged sands may even be accumulating at that location (USACE, 2008).

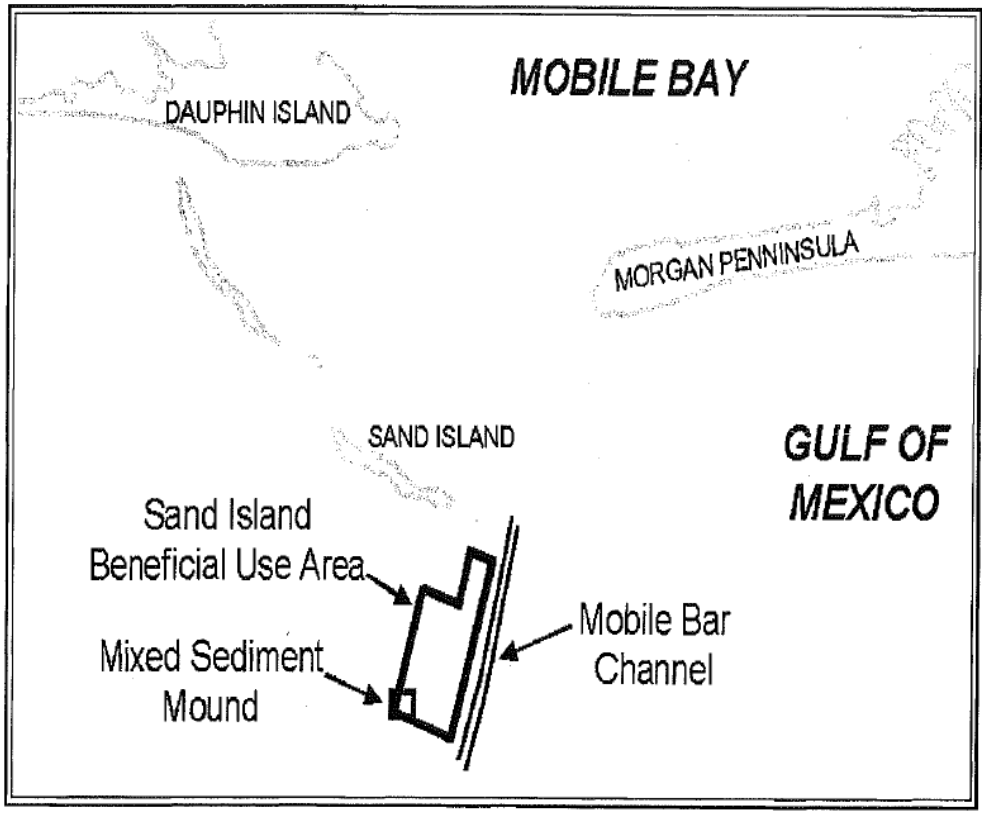

Figure 4. Sand Island Beneficial Use Area (Corps, 2008)

As part of the "Regional Sediment Management" concept being pursued by the Corps around the nation to seek beneficial uses of dredged material, two effort s have been pursued in Alabama. The first effort involved a demonstration project developed for the Perdido Pass Inlet (**see Figure 5**) (Parson and Rees, 2005). In the second effort, which is ongoing, the State Lands Division's Coastal Section and the Corps co-chair the Mobile Bay Interagency Working Group (IWG) (formerly known as the Beneficial Uses Group) that is attempting to:

1. Identify, plan, permit, and design beneficial use sites in Mobile Bay;
2. Restore the bay's sediment budget;
3. Create, enhance and protect habitat; and
4. Use sediments from channel maintenance for beneficial use projects that are either cost neutral or can be accomplished at a savings in maintenance costs.

The IWG's efforts are focused on the dredged material disposal needs of the Mobile Harbor project and are confined entirely Mobile Bay and do not consider Dauphin Island at all. One of the goals of this effort is to revise the existing State Water Quality Certification for Mobile Harbor to include thin-layer open water disposal of dredged material within Mobile Bay. In addition, three alternative open water sites have been identified in the bay for consideration to date as shown in **Figure 6** (USACE, 2012). The Corps has submitted a proposal for $2.5 million proposal for RESTORE ACT funding to the Gulf Coast Ecosystem Restoration Council to plan and design a 1,200-acre wetland creation site at the location shown in green in **Figure 6**. That site is being actively considered by the Council for funding.

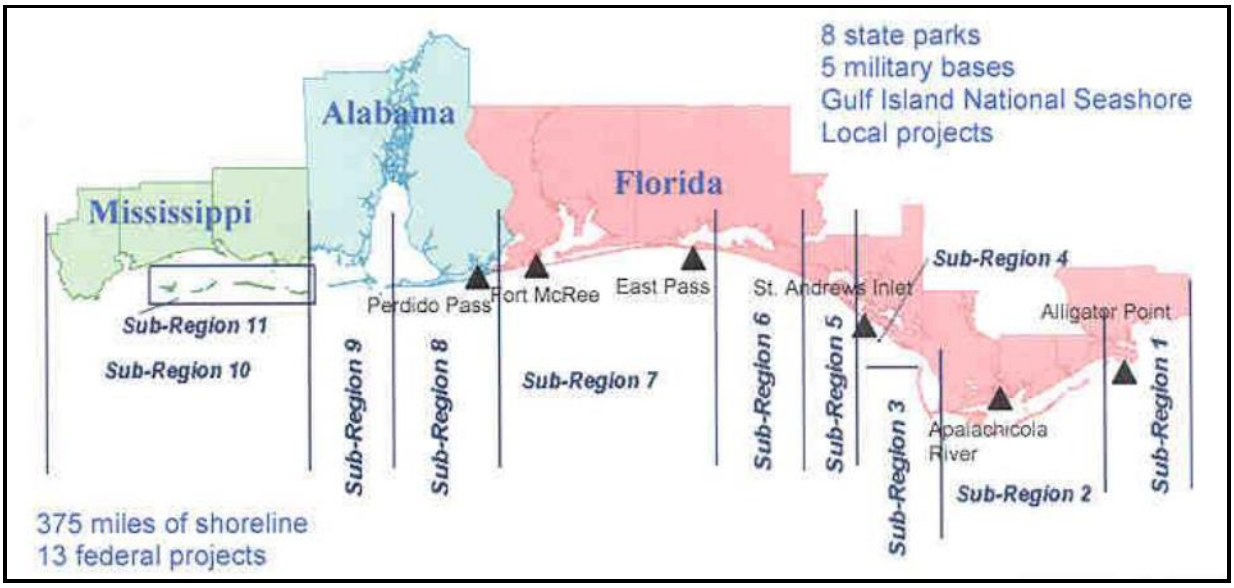

Figure 5. Corps of Engineers Northern Gulf of Mexico Regional Sediment Management demonstration area, and location of project initiatives (Parson and Rees, 2005).

In 2014, House Bill 386 was introduced into the Alabama Legislature in 2014. Modeled in part after Florida's similar law discussed above, HB 386 provides for beach quality sand material dredged from the state's coastal inlets to be placed on adjacent eroding beaches. The full text of HB 386 is contained in **Figure 6**. The bill was assigned to the Commerce Committee which held a single hearing on the bill in Montgomery. At the hearing, the Alabama State Port Authority spoke against it out of concern that, if passed, the cost to maintain the Mobile Harbor project could be increased. As a result, HB 386 was allowed to die in committee and would have to be reintroduced in a future session of the State Legislature. Thus as it presently stands, the State of Alabama continues to remain as the only Gulf Coast state without a law that requires appropriate dredged material be beneficially used to the extent practicable to counter coastal erosion.

Figure 6. Alternative open water beneficial uses sites for material dredged from the Mobile Harbor being considered by the Mobile Bay Interagency Working Group (USACE, 2015).

Section 1. The Legislature hereby declares:

(1) It recognizes the need for maintaining navigation inlets to promote commercial and recreational uses of our coastal waters and their resources.

(2) Inlets interrupt or alter the natural drift of beach-quality sand resources, which often results in these sand resources being deposited in nearshore areas or in the inlet channel, or in the inland waterway adjacent to the inlet, instead of providing natural nourishment to the adjacent eroding beaches.

(3) It is in the public interest to replicate the natural drift of sand which is interrupted or altered by inlets to be replaced and for each level of government to undertake all reasonable efforts to maximize inlet sand bypassing to ensure that beach-quality sand is placed on adjacent eroding beaches, and the activities cannot make up for the historical sand deficits caused by inlets but shall be designed to balance the sediment budget of the inlet and adjacent beaches and extend the life of proximate beach-restoration projects so that periodic nourishment is needed less frequently.

Section 2. (a) All construction and maintenance dredging of beach-quality sand shall be placed on the adjacent eroding beaches unless, if placed elsewhere, an equivalent quality and quantity of sand from an alternate location is placed on the adjacent eroding beaches.

(b) On an average annual basis, a quantity of beach-quality sand shall be placed on the adjacent eroding beaches which is equal to the natural net annual longshore sediment transport. The department shall, with the assistance of university-based or other contractual resources that it may employ or call upon, maintain a current estimate of the quantities of sand for purposes of prioritizing, planning, and permitting.

(c) Construction waterward of the coastal construction control line on down drift coastal areas, on islands substantially created by the deposit of spoil, located within one mile of the centerline of navigation channels or inlets, providing access to ports subject to the jurisdiction of the Alabama State Port Authority which suffers or has suffered erosion caused by the navigation channel maintenance or construction shall be exempt from the permitting requirements and prohibitions if the area is within the jurisdiction of a coastal municipality which has been granted a permit for the construction and maintenance of a beach project by the Commissioner of the Department of Conservation and Natural Resources. The timing and sequence of any construction activities associated with inlet management projects shall provide protection to nesting sea turtles and their hatchlings and habitats, to nesting shorebirds, and to native salt-resistant vegetation and endangered plant communities. Beach-quality sand placed on the beach as part of an inlet management project shall be suitable for marine turtle nesting.

(d) Subsections (a) and (b) shall not be a requirement imposed upon ports which are in the jurisdiction of the Alabama State Port Authority; however, the ports shall demonstrate reasonable effort to place beach-quality sand from construction and maintenance dredging and port-development projects on adjacent eroding beaches in accordance with port master plans approved by the Alabama State Port Authority, and permits approved and issued by the department, to ensure compliance with this section. Ports may sponsor or cosponsor inlet management projects that are fully eligible for state cost sharing.

(e) The Alabama State Port Authority shall ensure that any disposal of the beach-quality sand from federal projects in this state which involve dredging for the purpose of navigation is on, or in the nearshore area of, adjacent eroding beaches. The Alabama State Port Authority may consider permitting nearshore or upland disposal of the beach-quality sand if emergency conditions exist. The state recognizes that due to the growing demand for beach-quality sand resources for beach restoration and nourishment projects, the limited supply of the sand resources, and the cost of the projects, beach or nearshore sand placement is the least-cost disposal method.

(f) If federal investigations and reports or state-approved inlet management plans do not specify the entity or entities responsible for the extent of erosion caused by an inlet, the Alabama State Port Authority or local government, with the assistance of university-based or other contractual resources that they may employ or call upon, is encouraged to undertake assessments that aid in specifying the responsible entity or entities and in more accurately determining cost-sharing responsibilities for measures to correct the erosion. The entity that is responsible for maintenance dredging of an inlet may be deemed responsible for the erosion caused by the inlet if another responsible party is not specified in the assessment, a shore protection project investigation or report, or a state-approved inlet management plan.

(g) If the beneficiaries of the inlet, the local governments having jurisdiction of lands adjacent to the inlet, or the owners of property adjacent to the inlet are involved in a dispute concerning how much sand should be bypassed, the department shall protect its monetary investment in beach nourishment projects within the inlet's physical zone of influence by taking all reasonable actions to balance the sediment budget of the inlet and adjacent beaches, including implementation of inlet sand bypassing and other inlet management projects.

Section 3. This act shall become effective on the first day of the third month following its passage and approval by the Governor, or its otherwise becoming law.

Figure 6. Alabama House Bill 386
(http://legiscan.com/AL/bill/HB386/2014)

Recommendations

- House Bill 386 should be reintroduced into The Alabama Legislature. The sponsoring proponent in the Legislature must be willing to encourage their fellow legislators to enact the bill into law in order to provide a procedure for placing beach quality sands dredged from inlets in coastal Alabama onto adjacent downdrift shorelines to prevent the interruption of natural littoral drift processes and to avoid erosion of Alabama's limited Gulf beaches.

- Under the auspices of the Alabama Coastal Area Management Program (ACAMP), submit a request for a coastal planning project for Fiscal Year 2016 (or for Fiscal Year 2015 if funds remain available) to develop a shoreline restoration project for Dauphin Island that will address the appropriate action items specified in Objectives G and J of the restoration Strategic Planning Goal No.1 contained within the ACAMP Strategic Plan 2013-2018 (Coastal Section, 2013).

- The existing Mobile Bay Interagency Working Group (IWG) that is co-chaired by the State Land Division and the Corps, should be expanded to (1) include representatives from Dauphin Island, a wider array of environmental organizations, and other interests from south Mobile County; and (2) broaden its area of attention to also pursue beneficial uses of beach quality material dredged from the Mobile Harbor Outer Bar Channel to ameliorate the ongoing erosion of Dauphin Island. Further, the IWG should develop an objective plan modeled after the "Master Plan for the Beneficial Use of Dredged Material for Coastal Mississippi" (HCRT, 2011) to better guide future beneficial uses of dredged material for dredging projects in Mobile Bay, Mississippi Sound, Alabama's other coastal bays, and the state's nearshore Gulf waters.

- The Beneficial Use Planning Manual prepared by the EPA and the Corps (2007a) recognizes that the public could play a role in developing beneficial uses of dredged material, pointing out that project planners should do the following:

  - Involve the public from the outset. Go to the public; do not wait for the public to come to you.
  - Identify and respond to issues of local concern.
  - Understand the decision-making process and schedule to identify points of public access.
  - Make clear how the public's input will be used.
  - Use a variety of methods to inform and involve segments of the public with different levels of interest.
  - Involve representatives of the public in project decision making process.

  The Corps should pro-actively implement these recommendations to assure interests from Dauphin Island, south Mobile County, and the public at large are allowed to participate in the planning

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