I. Council Member Applicant and Proposal Information Summary Sheet

Council Member: **State of Alabama**	Point of Contact: **Hank Burch** Phone: **(251) 625-0814** Email: Hank.Burch@dcnr.alabama.gov

Project Identification

Project Title: **Alabama Barrier Island Restoration Through Beneficial Use of Dredged Sediments**

State(s): **Alabama** | County/City/Region: **Mobile County, Alabama**

General Location: *Projects must be located within the Gulf Coast Region as defined in RESTORE Act. (attach map or photos, if applicable)*

Sand/Pelican/Dauphin Island Complex; Mobile County, Alabama

Project Description

RESTORE Goals: *Identify all RESTORE Act goals this project supports. Place a **P** for Primary Goal, and **S** for secondary goals.*

- **P** Restore and Conserve Habitat
- S Restore Water Quality
- S Restore and Revitalize the Gulf Economy
- S Replenish and Protect Living Coastal and Marine Resources
- S Enhance Community Resilience

RESTORE Objectives: *Identify all RESTORE Act objectives this project supports. Place a **P** for Primary Objective, and **S** for secondary objectives.*

- **P** Restore, Enhance, and Protect Habitats
- S Restore, Improve, and Protect Water Resources
- S Protect and Restore Living Coastal and Marine Resources
- S Restore and Enhance Natural Processes and Shorelines
- S Promote Community Resilience
- S Promote Natural Resource Stewardship and Environmental Education
- S Improve Science-Based Decision-Making Processes

RESTORE Priorities: *Identify all RESTORE Act priorities that this project supports.*

- **√** Priority 1: Projects that are projected to make the greatest contribution …
- ___ Priority 2: Large-scale projects and programs that are projected to substantially contribute to restoring…
- **√** Priority 3: Projects contained in existing Gulf Coast State comprehensive plans for the restoration ….
- **√** Priority 4: Projects that restore long-term resiliency of the natural resources, ecosystems, fisheries …

RESTORE Commitments: *Identify all RESTORE Comprehensive Plan commitments that this project supports.*

- **√** Commitment to Science-based Decision Making
- **√** Commitment to Regional Ecosystem-based Approach to Restoration
- **√** Commitment to Engagement, Inclusion, and Transparency
- **√** Commitment to Leverage Resources and Partnerships
- **√** Commitment to Delivering Results and Measuring Impacts

RESTORE Proposal Type and Phases: *Please identify which type and phase best suits this proposal.*

X Project(s) **X** Planning **X** Technical Assistance **X** Implementation

___Program

Project Cost and Duration

Project Cost Estimate: **Total** : First Phase - $6M Second Phase - $12M Monitoring - $500,000	**$18,500,000.00**	**Project Timing Estimate**: Date Anticipated to Start: Upon Award Time to Completion: 11 years (Phase 1: 1yr; Phase 2: 10yrs) Anticipated Project Lifespan: N/A years* **Purpose is restoring sediment to littoral system*

II. EXECUTIVE SUMMARY

Overview: Mobile Harbor, Alabama, is located in the southwestern part of the state in Mobile and Baldwin Counties, at the junction of the Mobile River with the head of Mobile Bay. The Port of Mobile is a deep-water navigation project in Mobile, Alabama and is the only deep-water port in Alabama. The Port is at the terminus of the Mobile Bay Watershed, one of the largest, most ecologically diverse watersheds in the nation. The Mobile Bay watershed encompasses two-thirds of the state of Alabama and portions of Mississippi, Georgia, and Tennessee. It is the fourth largest watershed in the United States in terms of flow volume, and the sixth largest in terms of area.

The United States Army, Corps of Engineers, Mobile District (hereinafter "USACE") has the responsibility for maintenance of the federally authorized Mobile Harbor navigation project. In 2011, the USACE placed dredged material available from the Sand Island Beneficial Use Area (SIBUA) and maintenance dredging of the existing bar channel on Sand Island in an effort to mitigate potential adverse impacts during the Deepwater Horizon Oil spill. Under the authority Sec. 406 of P.L. 111-212 Supplemental Funds, the USACE placed approximately 1.5 million cubic yards (mcy) of sand beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action was from the SIBUA (with the option of using material directly from the Mobile Bar navigation channel). In addition to mitigating spill impacts, the USACE anticipated the project would provide an excellent opportunity to accelerate the return of sediment into the local littoral transport system consistent with established regional sediment management principles and goals.

Building upon these 2011 activities which successfully accelerated the return of sand to the Sand Island/Pelican Island complex, the State of Alabama proposes that RESTORE funds be provided to the USACE to allow the placement of additional sandy material in this littoral transport system. Additional sand placement conducted in a similar strategic manner will redirect littoral sediment to the beaches of Dauphin Island, Alabama's sole barrier island, and provide numerous ecological benefits. Implementation of the project will be performed in two phases.

Comprehensive Plan Goals and Objectives: The primary goal of this project is to Restore and Conserve Habitat. Placement of sandy material into the Sand Island/Pelican Island complex will help maintain a sediment transport complex in a manner that will reestablish the flow of sand on to the western region of Dauphin Island and enhance restoration of valuable habitat including sea turtle nesting habitat, shorebird foraging and roosting areas, and general coastal ecosystem functions. A more stable and sustainable coastal environment will also support a variety of associated flora and fauna and contribute to the success and continual survival of several threatened or endangered species. The project will enhance utilization of navigation maintenance sediment and contribute to maximizing use of dredge material for effective and sustainable coastal restoration, as well as securing the foundation upon which future restoration efforts will depend.

Secondarily, in addition to fostering numerous Comprehensive Plan objectives, the project activities also further goals to Restore and Revitalize the Gulf Economy, Replenish and Protect Living Coastal and Marine Resources, and Enhance Community Resiliency. For example, strategically placing the material will direct littoral sediment to the beaches of Dauphin Island, reduce damaging effects of hurricanes and severe storms to properties and environmental resources along the coastal region, help to stabilize or restore the shoreline by eliminating long-term erosion, and provide numerous ecological benefits to barrier island species such as piping plovers, terns, gulls, sea turtles and similar species. The proposed project also will serve to restore and revitalize the Gulf economy by improving habitat necessary to help sustain recreational boating and fishing activities in the Dauphin Island area. These activities, in addition to being vital to the local and regional economies, enhance the overall quality of life for residents of the Gulf Coast communities.

Implementation Information: Implementation of this project would occur in two phases. As all necessary permits for the proposed activities were obtained at the time of the 2011 project and remain current, implementation could begin immediately upon approval. The first phase will involve feeding the Sand Island/Pelican Island complex using dredged material from the SIBUA. The project could commence immediately upon award and begin with securing the contractor. Following contract execution, this phase would be completed in six months. The requested funding for this phase is $6 million.

The second phase placement strategy would be the same as described for the first phase but would beneficially utilize material directly from maintenance dredging of the Mobile bar channel. Accordingly, the second phase seeks additional funds to support a continued effort to place material beyond the approved SIBUA to promote the Sand Island complex on a more consistent basis. The funds would leverage the Federal O&M funds to allow material placement beyond the established Federal Standard which limits O&M dredging/disposing to the most cost effective, environmentally beneficial, and legal methods. The SIBUA currently meets the Federal Standard for the Mobile Bar project. Any additional cost to place O&M material beyond the SIBUA area requires additional funds from a source outside the Navigation O&M dollars. As the Mobile Bar is usually dredged every 3 years, Alabama is seeking the additional “delta” cost to place the material in the more rapid down drift feeder area every 3 years following completion date of Phase I. The requested funding for this phase is $12 million.

Monitoring & Measures of Success: This project would be monitored to ensure activities meet project goals and comply with permits and project plans/specifications. Project success is achieved by returning sand to the littoral transport system. The funding request includes $500,000 to cover monitoring costs.

Uncertainties/Risk: History of success from the 2011 project, as well as the USACE’s extensive experience with project activities, significantly reduces both the uncertainties and risks of this project. Further, appropriate adaptive management measures will be taken if project monitoring indicates that changes need to be made in the timing and/or location of sediment placement.

III. PROPOSAL NARRATIVE

Overview

Mobile Harbor, Alabama, is located in the southwestern part of the state in Mobile and Baldwin Counties, at the junction of the Mobile River with the head of Mobile Bay (Figure 1). The Port of Mobile is about 28 nautical miles north of the Bay entrance from the Gulf of Mexico and 170 nautical miles east of New Orleans, Louisiana. The Port of Mobile is a deep-water navigation project and is the only deep-water port in Alabama. The Port is at the terminus of the Mobile Bay Watershed, one of the largest, most ecologically diverse watersheds in the nation. The Mobile Bay watershed covers two-thirds of the state of Alabama and portions of Mississippi, Georgia, and Tennessee. It is the fourth largest watershed in the United States in terms of flow volume, and the sixth largest in terms of area.

The USACE ranked the Port of Mobile as the 12th largest port by tonnage in the nation during 2010, with a trade volume of 55,713,273 tons. The port is located along the Mobile River where it empties into Mobile Bay and has public, deepwater terminals with direct access to 1,500 miles of inland and intra-coastal waterways serving the Great Lakes, the Ohio and Tennessee river valleys (via the Tennessee-Tombigbee Waterway), and the Gulf of Mexico. The Alabama State Port Authority (ASPA) owns and operates the public terminals at the Port. The public terminals handle containerized, bulk, break bulk, roll-on/roll-off, and heavy lift cargoes. The port is also home to private bulk terminal operators. The container, general cargo and bulk facilities have immediate access to two interstate systems and five Class-I railroads. Additionally, the CG Railway operates from the port as a rail ferry service to Coatzacoalcos, Veracruz, in Mexico. The Port is the largest break bulk forest products port in the U.S. and the ASPA's McDuffie Terminal is one of the largest coal terminals in the U.S. and largest import coal terminal (ASPA 2008). The port was the fourth largest exporter of coal during 2012, with the majority exported for metallurgical processes. The largest shares of coal exports from Mobile went to Europe and South America (U.S. Energy 2012).

The Mobile Bay and Mobile Harbor navigation channels are terminal repositories of sediments transported downstream from several riverine systems and consists of mostly fine grain sediments, with a predominance of sand located in the lower project reaches of the bar channel. The USACE has the responsibility for maintenance of the federally authorized Mobile Harbor navigation project (Figure 2). The main Mobile Bay channel consists of a 45-foot by 400-foot channel from the mouth of the Bay (bar channel) extending 29 miles northward to the mouth of Mobile River. This stretch of channel has typically been dredged using hopper dredging equipment with disposal of the material in the approved Mobile-North Ocean Dredged Material Disposal Site (ODMDS). Disposal of the channel sediment in the ODMDS results in the removal of the material from the Bay's natural sediment system. This practice is especially detrimental for the sandy sediments removed from the lower bar channel (Byrnes et al. 2013). For this reason and to retain the sand in the local littoral sediment transport system, the USACE, Mobile District places the sandy material removed from the bar channel into a disposal area known as the Sand Island Beneficial Use Area (SIBUA). The SIBUA is located 3 miles offshore from the primary Mobile Bay entrance channel, bordered on the west by Dauphin Island, on the east by

Mobile Point, Alabama, adjacent to the Sand Island Lighthouse and west of the Bar Channel as it approaches to the Mobile Harbor Ship Channel (Figure 3). Establishing beneficial use (BU) and other environmentally acceptable alternatives within the bar channel is vital in contributing to the sustainability of the Sand Island/Pelican Island complex and, ultimately, the Dauphin Island barrier island system.

Dauphin Island is a strategically significant barrier island along the northern Gulf of Mexico and, more specifically, serves as the only barrier island providing protection to much of the State of Alabama's coastal natural resources. The size of the system spans over 200 acres of barrier island habitat including, beach, dune, overwash fans, intertidal wetlands, maritime forest and freshwater ponds. In addition, Dauphin Island provides protection to approximately 1/3 of the Mississippi Sound and much of the estuarine habitats in its lee including oyster reefs, mainland marshes and seagrasses. Dauphin Island has a rich history dating from its discovery in 1699 by the French to the role it played in the Civil War in protecting the mouth of Mobile Bay, and then to modern era by the USAF as an early warning radar station. Today, the island is home to one of the most important bird sanctuaries in the Southeast where an incredible 347 species have been reported. In addition, the island is an important tourist destination, home of the State's marine education facilities, and supporter of recreational and commercial fishing and the oil and gas industry. It provides valuable habitat for living coastal and marine resources (such as beaches, dunes, maritime forests, wetlands for neotropical migrants and many threatened and endangered species) and provides important protection to the eastern Mississippi Sound (including maintaining the salinity structure for estuarine fisheries, oysters, shrimp, crabs, SAVs) and the expansive Heron Bay marshes to the north. The island has been severely impacted by repeated extreme events over the past several centuries, most recently Hurricanes Ivan, Katrina, and Isaac and by the Deepwater Horizon oil spill.

In 2011, the USACE, Mobile District placed dredged material available from the SIBUA and maintenance dredging of the existing bar channel on Sand Island for purposes of mitigating impacts during the Deepwater Horizon Oil spill. Under the authority Sec. 406 of P.L. 111-212 Supplemental Funds, the USACE, Mobile District placed approximately 1.5 million cubic yards (mcy) of sand on Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action was from the SIBUA (with the option of using material directly from the Mobile Bar navigation channel). In addition to attempting to prevent, to the extent possible, submerged oil spill from entering/impacting the entrance of Mobile Bay, the USACE correctly anticipated this action would provide an excellent opportunity to accelerate the return of sediment into the local littoral transport system consistent with established regional sediment management principles and goals. Another secondary benefit resulted by providing additional protection to the Sand Island Lighthouse which is a prominent historical and cultural resource.

Figure 4 shows an aerial view of the completed 2011 project. Since project completion, the material from the placement on Sand Island has remobilized into the littoral transport system as intended and very little of the emergent island remains except for a prominent submerged berm as seen in Figure 5.

Building upon these 2011 activities which successfully accelerated the return of sand to the Sand Island/Pelican Island system, the State of Alabama proposes that RESTORE funds be provided to the USACE to allow the placement of additional sandy material in this littoral transport system. Additional sand placement conducted in a similar strategic manner will redirect littoral sediment to the beaches of Dauphin Island, Alabama's sole barrier island, and provide numerous ecological, economic and community benefits thereby furthering several Comprehensive Plan Goals and Objectives. However, the proposed project activities most directly promote the Comprehensive Plan Goal to Restore and Conserve Habitats.

Implementation Methodology

Implementation of this project would occur in two phases. As all necessary permits for the proposed activities were obtained at the time of the 2011 project and remain current, implementation could begin immediately upon approval. First phase activities are anticipated to be completed in one year (six months to complete contracting requirements and thereafter an additional six months to completion). The second phase would consist of a 10 year period following the completion of the first phase. Accordingly, total time for implementation completion of implementation activities is estimated to be 11 years.

The first phase will involve the relocation of an additional 1.5 mcy of sand to strategic locations within the Sand Island/Pelican Island systems using dredged material from the SIBUA to significantly jump start and promote continual feeding of material into the littoral transport system. The placement activities for the first phase would be open to either hopper dredges with pump-out capabilities or hydraulic pipeline dredges. The placement method would be consistent with the work successfully performed in 2011, with the exception of the maximum placement height being below the MLW elevation in order to promote quicker downdrift mobilization. The contractor's placement equipment would be similar to that used in "Littoral Zone Placement" projects where minimum/maximum underwater elevations are specified. The requested funding for this phase is $6 million.

The second phase placement strategy would be the same as described for the first phase but would beneficially utilize material directly from maintenance dredging of the Mobile bar channel. Accordingly, the second phase seeks additional funds to support a continued effort to place material beyond the approved SIBUA to promote the Sand Island/Pelican Island systems on a more consistent basis. The funds would leverage the Federal O&M funds to allow material placement beyond the established Federal Standard which limits O&M dredging/disposing to the most cost effective, environmentally beneficial, and legal methods. The SIBUA currently meets the Federal Standard for the Mobile Bar project. Any additional cost to place O&M material beyond the SIBUA area requires additional funds from a source outside the Navigation O&M dollars.

As the Mobile Bar is usually dredged every 3 years (historically ranging approximately 1.0 to 1.5 mcy per event), Alabama is seeking the additional "delta" cost to place the material in the more rapid down drift feeder area every 3 years for a ten year period following completion date of

Phase I. The requested funding for the delta cost of three additional placement events over a the 10 year period of this second phase is $12 million.

Finally, in order to fund the monitoring component detailed below, the project budget includes an additional $500,000 request. Accordingly, the total funding for the project is estimated to be $18.5 million. However, the aspects of this project can be scaled in relation to available funding, if necessary.

Consistency with Comprehensive Plan Goals

1. *Restore and Conserve Habitat* (Primary). The placement of additional sandy material in the Sand Island littoral transport system is being proposed for the purpose of accelerating the return of sand to the Sand Island system in a manner consistent with that conducted in 2011. Continued sand placement in a strategic manner will also redirect littoral sediment to the beaches of Dauphin Island and provide numerous ecological benefits. The project will enhance utilization of navigation maintenance sediment and contribute to maximizing use of dredge material for effective and sustainable coastal restoration. Placement of sandy material into the Sand Island/Pelican Island complex will help maintain a sediment transport complex in a manner that will reestablish the flow of sand on to the western region of Dauphin Island and enhance restoration of valuable habitat including sea turtle nesting habitat, shorebird foraging and roosting areas, and general coastal ecosystem functions. A more stable and sustainable coastal environment will also support a variety of associated flora and fauna and contribute to the success and continual survival of several threatened or endangered species.
2. *Replenish and Protect Living Coastal and Marine Resources* (Secondary). The BU of dredged material to bypass sand from the bar channel would provide an excellent opportunity towards accelerating the return of sediment into the Sand Island/Pelican Island littoral transport system consistent with established regional sediment management principles and goals. The project would also be beneficial a variety of other wildlife species that depend upon the Dauphin Island area.
3. *Restore and Revitalize the Gulf Economy* (Secondary). The proposed project will serve to restore and revitalize the Gulf economy by providing the habitat necessary to help sustain species that utilize the area. Recreational boating and fishing is a prominent industry vital to the local and regional economies. Contributing to the Sand Island/Pelican Island complex – and thereby securing the sustainability of Dauphin Island - will help in maintaining habitat areas vital to the local and Gulf economy.

Consistency with Comprehensive Plan Objectives

1. *Restore, Enhance, and Protect Habitats* (Primary). The primarily objective of the proposed project is to Restore, Enhance, and Protect Habitats by returning sediment into the local littoral transport system the placement of dredge material from the navigation channel. In addition to benefiting coastal processes, the project will support most of the remaining Comprehensive Plan Objectives. The project will enhance utilization of navigation maintenance sediment and contribute to maximizing use of dredge material for effective and sustainable coastal restoration.

2. *Restore and Enhance Natural Processes and Shorelines* (Secondary). In addition to maintaining and protecting adjacent Alabama shorelines, the project would support the protection of existing coastal configuration through the BU of dredged material. In doing so, the project will restore and enhance ecosystem resilience, sustainability, and natural defenses through the restoration of natural processes and shorelines. In addition, maintaining the sediment transport system stabilizes coastal areas by buffering wave energy.
3. *Protect and Restore Living Coastal and Marine Resources* (Secondary). As outlined in the discussion on Comprehensive Plan Goals, maintaining the open Gulf shorelines will protect healthy, diverse, and sustainable living coastal habitat essential for sea turtle nesting, nearshore benthic invertebrates, fish, and various wildlife species.
4. *Promote Community Resilience* (Secondary). An extensive and healthy coastline will provide a degree of storm protection. Enhancing and maintaining the supply of sediment to Alabama's only barrier island and its beaches will provide hurricane and storm damage protection by reducing the damaging effects of hurricanes and severe storms to properties and environmental resources along the coastal region and help to stabilize adjacent shorelines and protecting against long-term erosion. Additional secondary benefits to the community result from the enhancing the stability of the historic Sand Island Lighthouse as the additional material placement will leverage the filling of deep scour holes adjacent to the Light House during the 2011 project.
5. *Improve Science-based Decision-making Processes* (Secondary). The science associated with dredge material placement is well established, as demonstrated by the USACE's ongoing sediment management efforts the Mobile Bar channel. The project offers substantial opportunities to document and build on collaborative efforts with different missions and purposes. The Regional Sediment Management (RSM) approach for beneficially using dredged material to conducting restoration practices provides the ability to coordinate and collaborate; integrate numerous tools, technology, and data; leverage funding; and enhance partnerships. Activities associated with this effort will leverage existing tools from ongoing research while providing capabilities to evaluate probable consequences of natural change and specific project actions to make informed decisions associated with similar restoration practices in the future.
6. *Promote Natural Resource Stewardship and Environmental Education* (Secondary). The USACE, ADCNR, and ASPA would provide personnel to assist with field trips for high school and college students interested in Engineering and Sciences to learn about project construction and observe the functionality of the completed beneficial use of dredged material (i.e. a viable natural resource) through the USACE STEM program. Alabama will also involve partners, such as the Mobile Bay National Estuary Program and non-governmental conservation organizations to communicate with the public about this project to foster understanding of importance of BU in relation to ecological benefits to our barrier island. Project information and updates will also be provided through the USACE website and ADCNR's coastal restoration website (www.alabamacoastalrestoration.org) offering additional outreach opportunities related to project benefits and activities.

Support of Comprehensive Plan Priority Criteria

Priority 1. Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region, without regard to geographic location within the Gulf Coast Region.

The proposed project makes a significant contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, shorelines, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region by beneficially utilizing dredged material and placing it into the littoral system to replenish Alabama's barrier island and beyond. Information related to project activities and lessons learned from this project can be applied to similar projects along the coastal areas throughout the Gulf of Mexico.

Priority 2. Large-scale projects and programs that are projected to substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.

While some might not consider this individual project to be "large scale," these proposed activities are consistent with similar project activities around the Gulf that contribute to the same suite of restoration goals. The proposed activities and associated funding structure could be replicated across the Gulf Coast Region, particularly in other areas where deep water channels interrupt the natural littoral transport of sediments. Moreover, the role and importance of barrier islands for their ecological and protective benefits is well recognized across the Gulf.

Priority 3. Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

The State of Alabama and its local, state and federal partners have long recognized the need for wise use of natural resources including sediments. Almost 20 years ago, the USACE formed one of the first Regional Sediment Management (RSM) working groups in coastal Alabama. This working group worked diligently over the years to improve sediment management in coastal Alabama, resulting in improved sediment bypassing at Perdido Pass in Orange Beach. Additionally, the close working relationship of the working group resulted in the fast-tracking of the Gulf State Park-Florida Point Unit Restoration Project following Hurricane Ivan, This project, which was conceived, permitted and constructed in less than 5 months, removed a massive quantity of sediment the Perdido Pass Navigation Project and utilized it to rebuild the dunes at Florida Point. This served to clear the channel of sediment placed there by Ivan and restored critical dune habitat, a win-win result.

Based on these successes, during 2012, the USACE and the ASPA formed the Mobile Harbor Interagency Working Group (IWG) specifically to address sediment management in the Mobile Harbor Navigation project. The IWG consists of a wide range of state, local and federal entities and NGO's, Using a collaborative process, in less than two years, the IWG moved forward with the pilot project to study thin-layer open water placement of dredged

materials in Mobile Bay, the filling of a large hypoxic man-made hole off of Brookley Field, and the proposal to create a large scale beneficial use marsh creation project on the upper end of Mobile Bay. The IWG is fully aware of the 2011 Sand Island sediment bypassing project and is supportive of the proposal to continue actively bypass sediment associated with the Bar Channel

Further, this project is consistent with the sediment management enhancement policies of the Alabama Coastal Area Management Program and is supported by the objectives of the Mobile Bay NEP Comprehensive Conservation and Management Plan. The project also meets the goals of the Gulf of Mexico Alliance's Habitat Conservation and Restoration Team's Regional Sediment Management/Beneficial Use objectives of promoting improved sediment bypassing and sediment management around the Gulf.

Priority 4. Projects that areprojected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region, without regard to geographic location within the Gulf Coast Region

The proposed project restores the long-term resiliency of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands impacted by the Deepwater Horizon Oil Spill. Publicly available data indicates that the Sand Island/Pelican Island complex, and specifically the Dauphin Island coastline, did experience extensive oiling during the spill and response activities did take place and impact this complex as well as the beaches of Dauphin Island.

Support of Comprehensive Plan Commitments

The proposed project will achieve the commitments in the Comprehensive Plan, which include:

1. *Commitment to Science-Based Decision-Making.* The decisions made pursuant to the project will be based on the best available science, and this project will evolve over time to incorporate new science, information, and changing conditions. Commitment to best available science is evidenced in the previously conducted sediment management actions conducted by the Mobile District. In addition, monitoring performed pursuant to this project could be utilized across the Gulf as to planning and implementation of similar efforts.
2. *Commitment to a Regional Ecosystem-based Approach to Restoration*. While the project promotes ecosystem-based restoration within the Sand Island/Pelican Island/Dauphin Island specific littoral system it is a foundational project benefiting a significant barrier island – in fact Alabama's only barrier island – and provides broad based benefits to Gulf waters including, but not limited to, the Mississippi Sound and Heron Bay areas and the shoreline of southern Mobile County. Further, this project could be expanded or combined with other projects to elicit Gulf wide benefit.
3. *Commitment to Engagement, Inclusion, and Transparency.* The proposed project includes the support and participation from the diverse stakeholders who live, work, and play in the Gulf Coast region including the members the Interagency Working Group (IWG) as well as the Town of Dauphin Island. Moreover, project information and updates will be provided

through the USACE website and ADCNR's coastal restoration website (www.alabamacoastalrestoration.org) to ensure data sharing and foster additional outreach opportunities related to project benefits and activities.

4. *Commitment to Leveraging Resources and Partnerships*. The proposed project has the continued involvement of the Mobile Interagency Working Group (IWG) established to evaluate and provide guidance pertaining to alternative sediment management practices in Mobile Bay. The IWG consists of local, State and Federal agencies as well as academia and other non-governmental entities. The project offers substantial opportunities to document and build on these collaborative efforts with different missions and purposes. Opportunities that could be applied in other areas of the southeast and the nation include: collaboration and support; sediment transport modeling; information exchange and dissemination; knowledge management; training; and integration of the regulatory, planning, engineering, and operational processes. The RSM approach for beneficially using dredged material to bypass suitable material into the local littoral system and BU practices provides the ability to coordinate and collaborate; integrate numerous tools, technology, and data; leverage funding (including current federal funds allocated to the USACE for maintenance of the Mobile Harbor); and enhance partnerships.
5. *Commitment to Delivering Results and Measuring Impacts*. The proposed project which includes monitoring and adaptive management and measurements for success shows the importance of achieving tangible results over a specified time frame and ensuring that funds are invested in a way to benefit the coastal health and ecosystem of the Gulf of Mexico.

Project Monitoring Components

This project would be monitored to ensure activities meet project goals of properly bypassing dredged material at the Sand Island/Pelican Island complex for the benefit of Dauphin Island and comply with project permits and plans/specifications. Prior to construction, the USACE would develop a monitoring protocol for this placement area. The protocol would include project goals, objectives, performance criteria, monitoring methods and schedule, and potential adaptive management measures. Project success is achieved by returning sand to the littoral transport system and will be measured by surveys of the placement area and adjacent littoral zones.

The funding request includes $500,000 to cover monitoring costs. Costs have been estimated based on the assumptions that: 1) the primary monitoring data for evaluating achievement of the success criteria would consist of aerial photography; 2) sand tracer studies; and 3) regular site visits hydrographic surveys to monitor changes in the placement area.

Risks and Uncertainties of Proposed Project

History of successful execution of and results from the 2011 project, as well as the USACE's extensive experience with project activities, significantly reduces both the uncertainties and risks associated with this project. However, all lessons learned from the 2011 project will be incorporated into project planning and implementation. Further, appropriate adaptive management principles will be followed to further reduce implementation risks. Finally, the

completion of permitting and environmental compliance also reduces risk as to any unknown impacts resulting from implementation.

An analysis as to identifiable uncertainties (noted below) revealed no significant issues:

Construction

Dredging and placement of the material will be dependent upon the availability of appropriate pipeline cutterhead dredging equipment. The work being conducted will be in areas under the influence of the wind and wave conditions of the open Gulf of Mexico and, therefore, work could be restricted to certain weather windows. However, this is routine as to these activities which are routinely performed by the USACE.

Environmental

Although no environmental construction windows are proposed, all construction and placement activities would be completed in such a manner, as much as feasible, to minimize any environmental impacts to sea turtles, shorebirds, or other species.

Hazardous, Toxic, and Radioactive Waste (HTRW)

The project area lies primarily where there are no known sources of contamination. However, the total amount of oil that escaped into the Gulf as a result of the Deepwater Horizon oil spill, as well as any remaining areas where such oil still might be present, is unknown. Should oil be encountered during project construction, the U.S. Coast Guard will be notified.

Relative Sea Level Rise

Current USACE guidance on assessing the impacts of sea level rise on project construction and operation has been utilized in the preparation of this proposal (USACE EC 1165-2-212, October 2011). The USACE guidance specifies the use of “low”, “intermediate”, and “high” rates of future sea-level change based upon the local historic rate of mean sea level (low) and curves established by the National Research Council (1987) for the intermediate and high rates. USACE guidance requires consideration of projected future sea-level changes and impacts in project planning, design, and O&M. Because future sea level rise rates are uncertain, planning and design should consider project performance for a range of sea level change rates. Historic rates are used as the lower bound sea level change rate. Predictions of future sea level due to intermediate and high rates of sea level change are to be developed in accordance with USACE guidance from the National Research Council’s 1987 report *Responding to Changes in Sea Level: Engineering Implications.*

Historic rates of sea level change are determined from tide gage records. Long-term tide gage records on the order of 40 years are preferred over shorter term records because the sea level change rate estimate error decreases as the period of record increases. There are three long-term tide gages in the vicinity of Mobile Bay: Dauphin Island, Pascagoula, and Biloxi. Sea level rise rates for these locations are shown in Table 1.

Table 1 ***Historic Sea Level Rise Rates***

Location	Rise in mm/yr	Std. Error of Rise
Dauphin Island, AL	2.89	0.87
Period of Record	1966-2006	
Biloxi, MS	2.26	0.26
Period of Record	1928-'76, '79-98	

Source: USACE.

Predicted rise scenarios for the Biloxi and Dauphin Island sites were computed in accordance with current USACE guidance with predicted rise varies between about 0.8 feet and 1-foot. Use of Dauphin Island relative sea level rise rates in the predictive equations results in about 0.25 feet (three inches) greater rise over the 100 year period 2000-2100 than predictions using rates determined from the Biloxi gage data.

Analysis of historical data suggests a relative sea level rise of approximately nine inches along the Mississippi coast during the 20th century. Relative sea level rise is what an observer standing on the shoreline over a long period would observe, which includes the combined effects of land subsidence (or uplift) and the rise of sea level in and of itself. For the last twenty-five years, the climate change community has also been arguing that sea level rise will accelerate in the 21st century, though to date, there is no clear confirmation that acceleration is actually taking place.

It is important to recognize that sea level has been rising, and it's prudent (and required by USACE regulations) to recognize the uncertainties inherent in sea-level rise projections. Given the long-term nature of this phenomenon, future sea level rise was projected over a 100-year period. However, the period of analysis specified by ER 1105-2-100 for USACE water resources projects of this type is 50-years. Based on extension of the Biloxi, MS tide gage data, predicted 21st century sea level rise is about 0.8 feet, about 0.4 feet over a period of 50 years. This assumes that sea level rise proceeds in the 21st century at a rate corresponding to the 20th century rate at this location. Assuming a high rate of rise in accordance with USACE guidance gives an estimate on the order of five feet of rise over the 21st century. This level of sea level rise can be easily adapted to in the proposed project.

Environmental Compliance

All appropriate environmental coordination, NEPA documentation, and permits were obtained in order to implement the 2011 project. All environmental compliances and certifications remain current. Accordingly, this project is ready for implementation. (See Environmental Checklist in Section VI and permit documents in Section IX.)

Project Benefits

This proposed project is built upon the foundational concept of returning the sandy material into the Sand/Pelican Island littoral system in order to sustain a sediment transport complex in a

manner that will reestablish the flow of sand to Dauphin Island. Moreover, the results of the similar 2011 project demonstrate the significant likelihood of success for the project as contemplated. While the proposed activities most directly promote the Focus Area Goal to Restore and Conserve Habitats, it also provides numerous ecological, economic and community benefits thereby furthering several Comprehensive Plan Goals and Objectives.

The initial core step of addressing significant coastal ecosystem functions by enhancement of the littoral transport system for Dauphin Island the necessary groundwork to enhance future habitat restoration activities and provide the stability to sustain and leverage such activities benefiting resources including, but not limited to, sea turtle nesting habitat, shorebird foraging and roosting areas, a variety of associated flora and fauna, survival of several threatened or endangered species.

Additionally, enhancing and maintaining the supply of sand to the littoral system will contribute to storm damage protection by reducing the damaging effects of hurricanes and severe storms to properties and environmental resources along the coastal region and help to stabilize or restore the shoreline by eliminating long-term erosion.

The proposed project activities benefit the geographically vulnerable community of Dauphin Island and its habitats critical to natural resource dependent industries such as recreational boating and fishing as well as tourism. Additional indirect community benefits will be attained by stabilizing and protecting the Sand Island Lighthouse which serves is a culturally and historically significant landmark in the coastal region.

IV. LOCATION INFORMATION & ILLUSTRATIONS

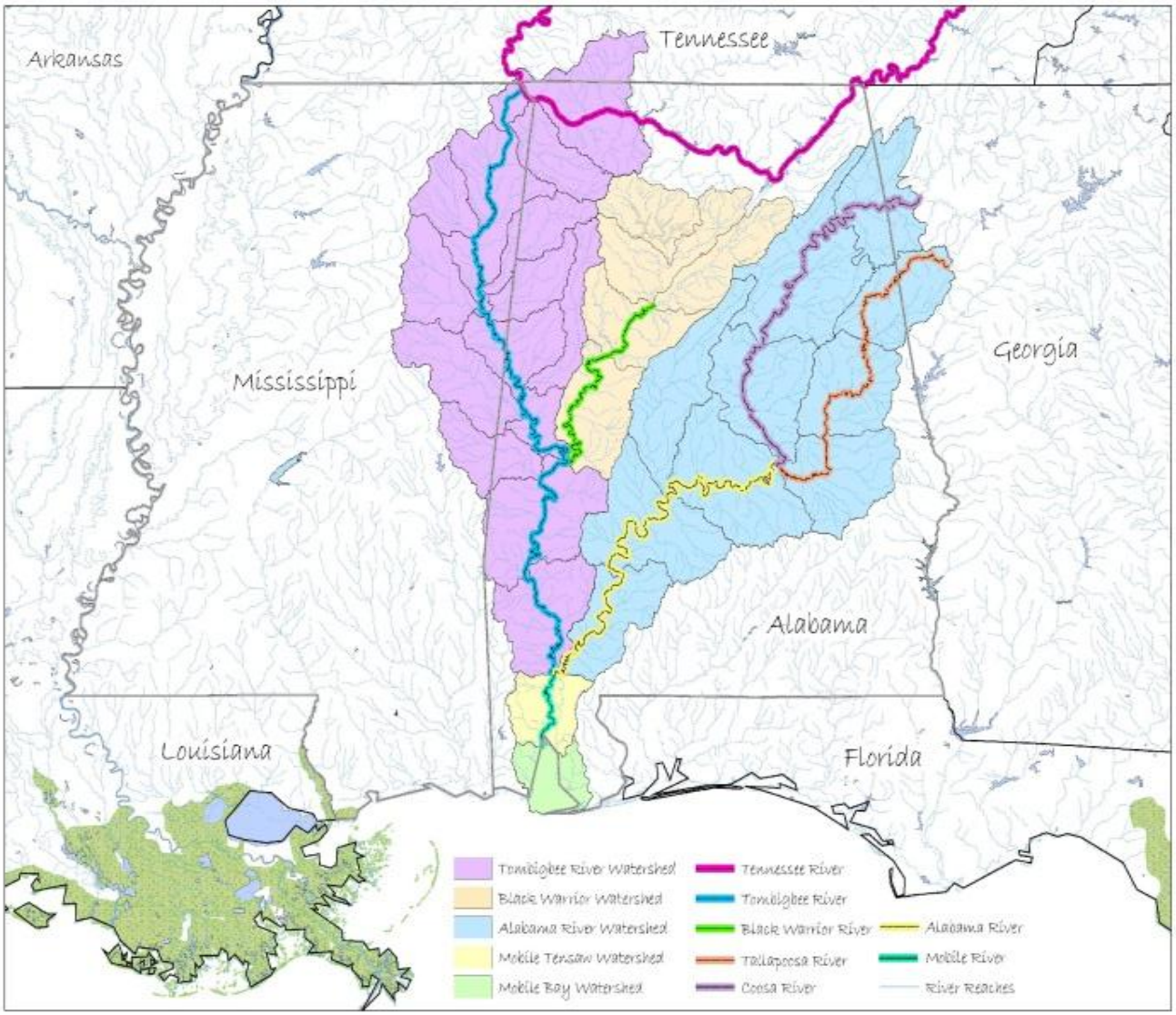


Figure 1. Location of Mobile Bay Watershed Area

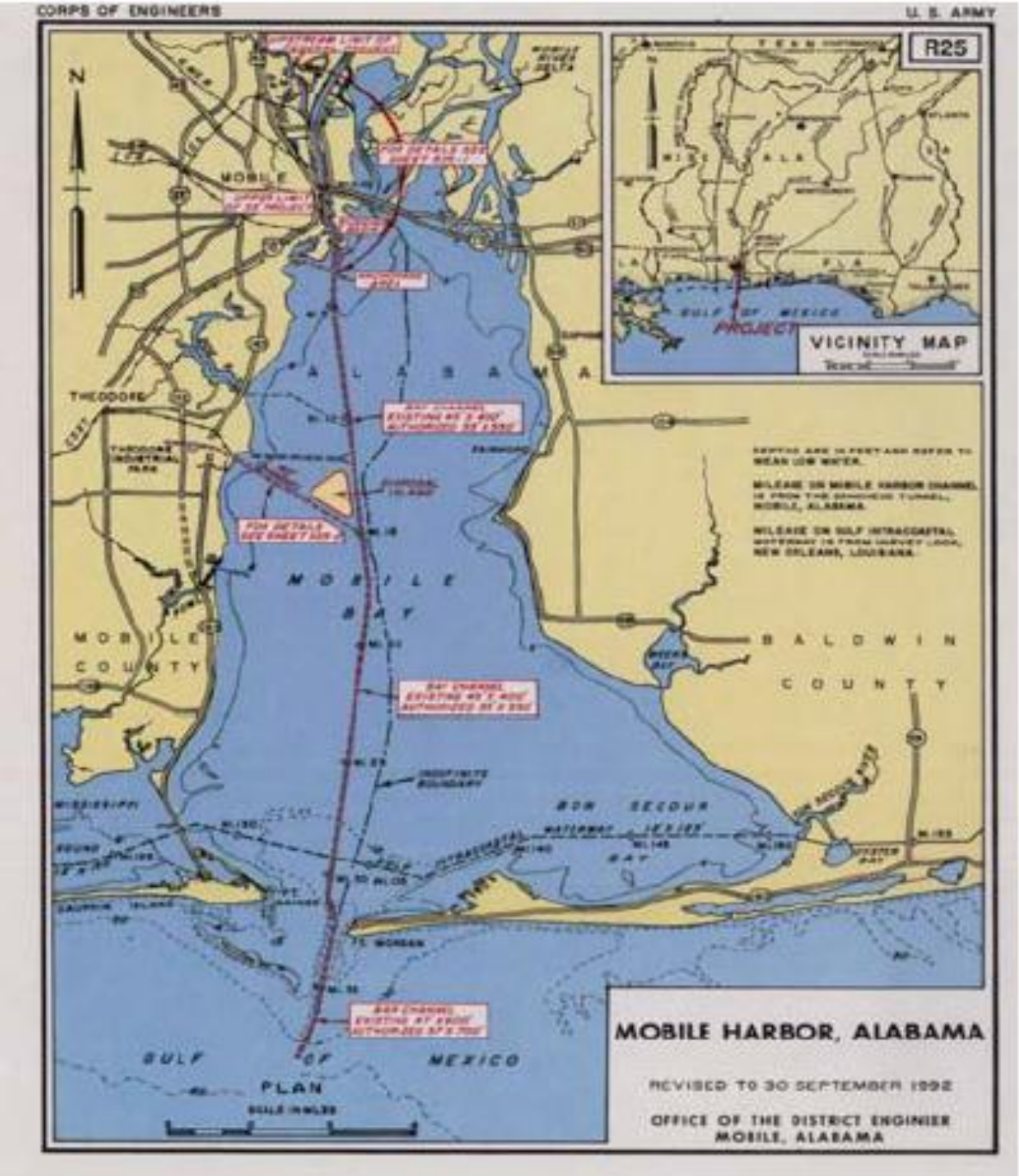


Figure 2. Location of the Mobile Bay navigation channel

Figure 3. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

Figure 4. Completion of the 2011 Sand Island placement

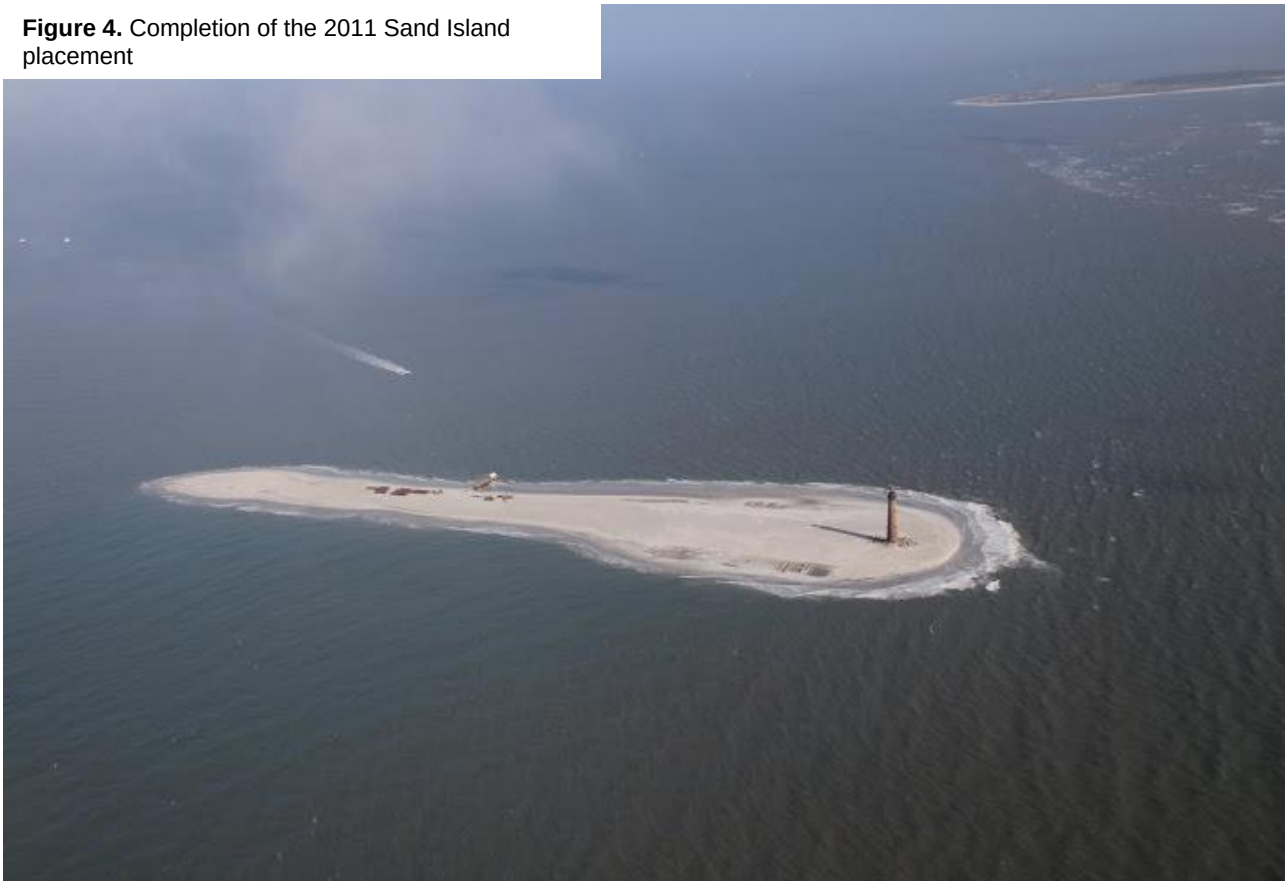
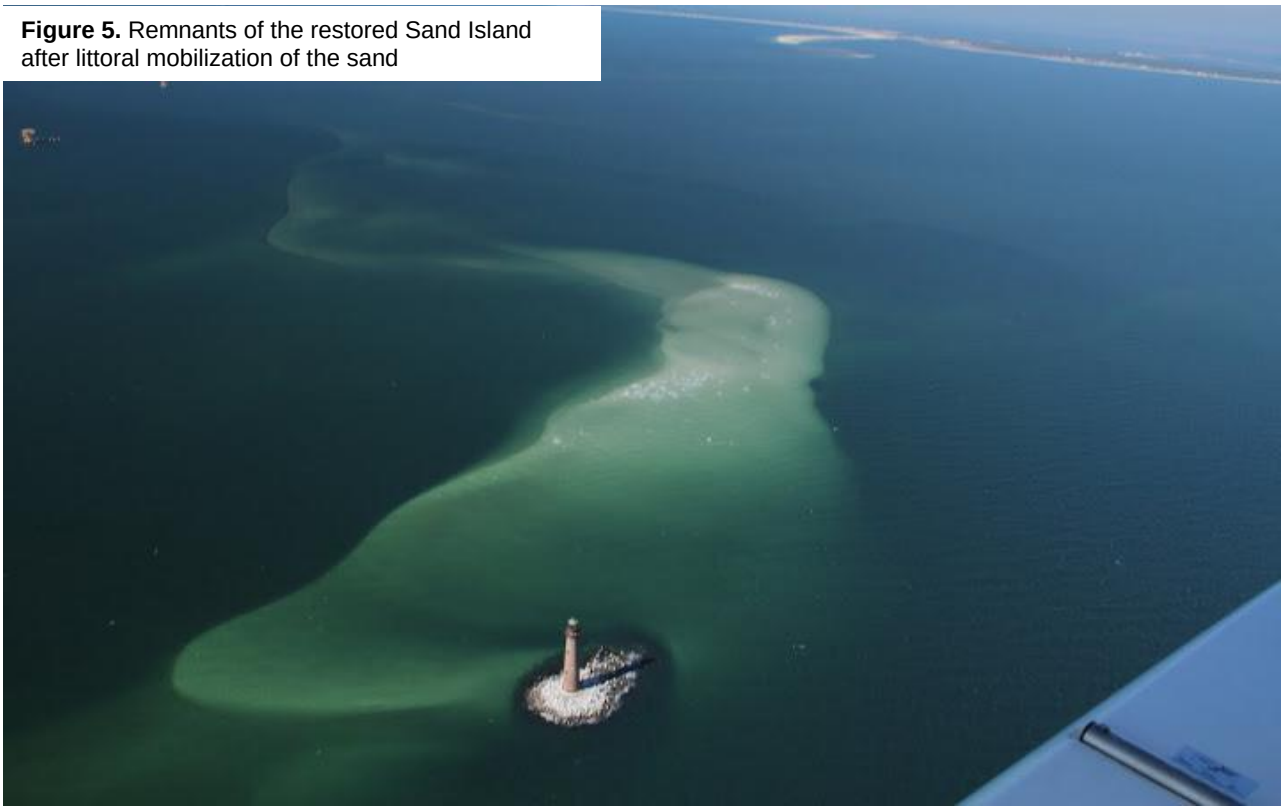


Figure 5. Remnants of the restored Sand Island after littoral mobilization of the sand



V. HIGH LEVEL BUDGET NARRATIVE

The US Army Corps of Engineers (USACE) has extensive experience conducting the type of work that is proposed. The USACE will serve as project administrator and will secure contractors to complete the work as described. USACE staff will provide direct oversight of work conducted by contractors. The proposed project requests funds for implementation (contracting) and monitoring as follows:

Activity	**Budget**
Phase 1: Relocation of approximately 1.5mcy of sand from the SIBUA and placement in the Sand/Pelican/Dauphin Island littoral system. Work to be performed by contractor under direction of USACE.	$6,000,000.00
Phase 2: Delta Cost associated with placement of future ship channel sands in the Sand/Pelican/Dauphin Island littoral system, rather than placement in SIBUA. Based on 3 maintenance dredge events over a 10 year period, each producing 1-1.5mcy of material.	$12,000,000.00
Monitoring & Data Sharing: Includes costs associated with evaluating achievement of the success criteria. Includes: collection of aerial photography; sand tracer studies; and regular site visits and hydrographic surveys to monitor changes in the placement area. To be conducted over life of project.	$500,000.00
TOTAL	**$18,500,000.00**

VI. ENVIRONMENTAL COMPLIANCE

Gulf Coast Ecosystem Restoration Council
Environmental Compliance Checklist

Please check all federal and state environmental compliance and permit requirements as appropriate to the proposed project/program

Environmental Compliance Type	**Yes**	**No**	**Applied For**	**N/A**
Federal				
National Marine Sanctuaries Act (NMSA)				x
Coastal Zone Management Act (CZMA)	x			
Fish and Wildlife Coordination Act	x			
Farmland Protection Policy Act (FPPA)				x
NEPA – Categorical Exclusion				x
NEPA – Environmental Assessment	x			
NEPA – Environmental Impact Statement				x
Clean Water Act – 404 – Individual Permit (USACOE)				x
Clean Water Act – 404 – General Permit(USACOE)				x
Clean Water Act – 404 – Letters of Permission(USACOE)				x
Clean Water Act – 401 – WQ certification	x			
Clean Water Act – 402 – NPDES				x
Rivers and Harbors Act – Section 10 (USACOE)				x
Endangered Species Act – Section 7 – Informal and Formal Consultation (NMFS, USFWS)	x			
Endangered Species Act – Section 7 - Biological Assessment (BOEM,USACOE)				x
Endangered Species Act – Section 7 – Biological Opinion (NMFS, USFWS)	x			
Endangered Species Act – Section 7 – Permit for Take (NMFS, USFWS)	x			
Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) – Consultation (NMFS)	x			
Marine Mammal Protection Act – Incidental Take Permit (106) (NMFS, USFWS)				x
Migratory Bird Treaty Act (USFWS)				x
Bald and Golden Eagle Protection Act – Consultation and Planning (USFWS)				x
Marine Protection, Research and Sanctuaries Act – Section 103 permit (NMFS)				x
BOEM Outer Continental Shelf Lands Act – Section 8 OCS Lands Sand permit				x
NHPA Section 106 – Consultation and Planning ACHP, SHPO(s), and/or THPO(s)	x			
NHPA Section 106 – Memorandum of Agreement/Programmatic Agreement				x
Tribal Consultation (Government to Government)	x			
Coastal Barriers Resource Act – CBRS (Consultation)				x
State				
As Applicable per State	x			

As noted previously, all necessary permits for the proposed activities were obtained at the time of the 2011 project and remain current. Copies of permit documents can be found in Section IX.

VII. DATA/INFORMATION SHARING

The project offers substantial opportunities to document and build on Federal, state, local, non-profit, and academia collaborative efforts with different missions and purposes. Opportunities that could be applied in other areas of the southeast and the nation include: collaboration and support; watershed technology; information exchange and dissemination; knowledge management; training; and integration of the regulatory, planning, engineering, and operational processes. The approach taken will provide the opportunity to coordinate, collaborate and share tools, technology and data; leverage funding; and enhance partnerships. Information, data, and tools generated through the implementation of the project will be made available to state and Federal agencies, academia, and other stakeholders interested in conducting similar projects towards improving the use of sediment resources. The data can provide managers with information and tools necessary to make more informed decisions concerning BU opportunities associated with dredged material.

In addition, project information and updates will be provided through the USACE website and ADCNR's coastal restoration website (www.alabamacoastalrestoration.org) to ensure data sharing and foster additional outreach opportunities related to project benefits and activities.

VIII. REFERENCES

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Mabus, R. 2010. America's Gulf Coast: A long term recovery plan after the Deepwater Horizon Oil Spill. http://www.epa.gov/indian/pdf/mabus-report.pdf

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IX. Other

1. Support

The ADCNR, State Lands Division has confirmed that the USCAE, Mobile District fully supports continued placement of materials as set forth pursuant to the project proposal as long, consistent with the State of Alabama's request, RESTORE funds are utilized to implement the described activities. Additionally, the USCAE is supportive of the proposed work as all activities could be conducted under the current certifications and environmental compliance coordination.

2. Enclosure 1

Environmental Assessment, 404(b)1 Evaluation Report, and Finding of No Significant Impact (FONSI): Sand Island 406 Oil Mitigation, Mobile County Alabama. (124 Pages). Provided by the US Army Corps of Engineers, Mobile District.

ENCLOSURE 1

ENVIRONMENTAL ASSESSMENT, 404(b)(1) EVALUATION REPORT, AND FINDING OF NO SIGNIFICANT IMPACT (FONSI)

SAND ISLAND 406 OIL MITIGATION
MOBILE COUNTY
MOBILE, ALABAMA

ENVIRONMENTAL ASSESSMENT, 404(b)(1) EVALUATION REPORT, AND FINDING OF NO SIGNIFICANT IMPACT (FONSI)

SAND ISLAND 406 OIL MITIGATION
MOBILE COUNTY
MOBILE, ALABAMA

Prepared by
U.S. Army Corps of Engineers, Mobile District
Planning and Environmental Division
Environmental Resources Branch
Coastal Environment Team

April 2011

FINDINGS OF NO SIGNIFICANT IMPACT - DRAFT
SAND ISLAND 406 OIL MITIGATION
MOBILE, ALABAMA

Waterway and Location: Mobile Harbor, Alabama, is located in the southwestern part of the state in Mobile and Baldwin Counties, at the junction of the Mobile River with the head of Mobile Bay. The Port of Mobile is about 28 nautical miles north of the Bay entrance from the Gulf of Mexico and 170 nautical miles east of New Orleans, Louisiana. The Sand Island Beneficial Use Area (SIBUA) and proposed restored Sand Island is located 3 miles offshore from the primary Mobile Bay entrance channel, bordered on the west by Dauphin Island, on the east by Mobile Point, Alabama, adjacent to the Sand Island Lighthouse and west of the Bar Channel as it approaches to the Mobile Harbor Ship Channel**.**

As District Engineer, U.S. Army Corps of Engineers, Mobile District, it is my duty in the role and responsible Federal Officer to review and evaluate, in light of public interest, the stated views of other interested agencies and concerned public, the environmental effects of this proposed action.

My evaluation and findings are as follows:

1. Description of the Proposed Action for Which These Findings Are Made.

The proposed Sand Island 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Actions for this effort will be over and above the District's normal maintenance dredging activities for the Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. In addition to long term oil mitigation, the Corps feels that this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management implementation principles and goals. Also, it is believed that this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the light house will provide valuable protection to this historic structure.

2. Coordination. Mobile District coordinated the proposed action with federal, state, and local agencies and issued a Notice of Availability to solicit comments on the proposed action via public notice FP10-MH15-10, dated December 13, 2010.

3. Environmental Effects and Impacts. This proposed action is in compliance with all environmental laws. The funding for this effort has already been received. Sec 406 of P.L. 111-

212 Supplemental Funds clearly states that funds have already been made available to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

4. Determination. I have determined that this action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, the action does not require the preparation of a detailed statement under Section 102 (2) (c) of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.). My determination was made considering the following factors discussed in the Environmental Assessment to which this document is attached:

a. The proposed action will not adversely impact or threaten the continued existence of any threatened or endangered species potentially occurring in the project area.

b. No unacceptable adverse cumulative or secondary impacts will result from implementation of this action.

c. The proposed action will not significantly impact wetlands or cultural resources.

d. The proposed action will result in no significant impacts to air or water quality.

e. The proposed action will result in no significant adverse impact to fish and wildlife resources.

f. The proposed action complies with Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks."

g. The proposed action complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."

5. Findings and Conclusions. The proposed action will result in no significant environmental impacts and is the alternative that represents sound natural resource management practices and environmental standards.

Date: _____

_____
STEVEN J. ROEMHILDT, P.E.
Colonel, Corps of Engineers
District Commander

ENVIRONMENTAL ASSESSMENT

SAND ISLAND 406 OIL MITIGATION

MOBILE, ALABAMA

FEDERALLY AUTHORIZED

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ACRONYMS AND ABBREVIATIONS

ADEM	Alabama Department of Environmental Management
BA	Biological Assessment
BO	Biological Opinion
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Corps	United States Army Corps of Engineers
CZC	Coastal Zone Consistency
DA	Disposal Area
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
ER	Engineering Regulation
ESA	Endangered Species Act
FONSI	Findings of No Significant Impact
GMFMC	Gulf of Mexico Fishery Management Council
GIWW	Gulf Intracoastal Waterway
ITS	Incidental Take Statement
Mg/l	Milligrams per liter
MHTB	Mobile Harbor Turning Basin
MLW	Mean Low Water
MLLW	Mean Lower Low Water
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLAA	Not Likely to Adversely Affect
NLAM	Not Likely to Adversely Modify
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
ODMS	Ocean Dredged Material Disposal Site
O&M	Operations and Maintenance
RBO	Regional Biological Opinion
Register	National Register of Historic Places
SAV	Submerged Aquatic Vegetation
SHPO	State Historic Preservation Officer
SIBUA	Sand Island Beneficial Use Area
TSS	Total Suspended Solids
USFWS	United States Fish and Wildlife Service
WRDA	Water Resources Development Act
WQC	Water Quality Certification

ENVIRONMENTAL ASSESSMENT
SAND ISLAND 406 OIL MITIGATION
MOBILE, ALABAMA

FEDERALLY AUTHORIZED

1.0 INTRODUCTION

This Environmental Assessment (EA) presents impacts that would potentially result from the proposed placement of fill material for the re-establishment of Sand Island just to the south of the mouth of Mobile Bay for purposes of long term oil mitigation. The U.S. Army Corps of Engineers, Mobile District, proposes to place at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico. Under the authority included below, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for re-establishing Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action will be from the Sand Island Beneficial Use Area (SIBUA) and the Mobile Bar Channel. In addition to oil mitigation, the Corps feels that this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system and increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. It is believed this will also provide protection to the Sand Island Lighthouse which is a valuable cultural resource. The purpose of this EA is to determine whether or not the proposed action has the potential for creating significant impacts to the environment and would thereby warrant a more detailed study on possible impacts, mitigation, and alternative courses of action.

An intermediate level of analysis, an EA, is prepared for an action that is not clearly categorically excluded, but does not clearly require an Environmental Impact Statement (EIS) [40 Code of Federal Regulations (CFR) §1501.3 (a) and (b)]. Based on the EA, Federal agencies either prepares an EIS, if one appears warranted, or issues a "Finding of No Significant Impact" (FONSI), which satisfies the NEPA requirement. This EA is prepared according to the Corps' Engineer Regulation (ER) 200-2, Procedures for Implementing NEPA, and the Council of Environmental Quality (CEQ) Regulations (40 CFR § 1508.27) for Implementing the Procedural Provisions of NEPA (40 CFR § 1500-1508).

1.1 Location. Mobile Harbor, Alabama, is located in the southwestern part of the state in Mobile and Baldwin Counties, at the junction of the Mobile River with the head of Mobile Bay (**Figure 1**). The Port of Mobile is about 28 nautical miles north of the Bay entrance from the Gulf of Mexico and 170 nautical miles east of New Orleans, Louisiana. The SIBUA and proposed restored Sand Island is located 3 miles offshore from the primary Mobile Bay entrance channel, bordered on the west by Dauphin Island, on the east by Mobile Point, Alabama, adjacent to the Sand Island Lighthouse and west of the Bar Channel as it approaches to the Mobile Harbor Ship Channel (**Figure 2).**

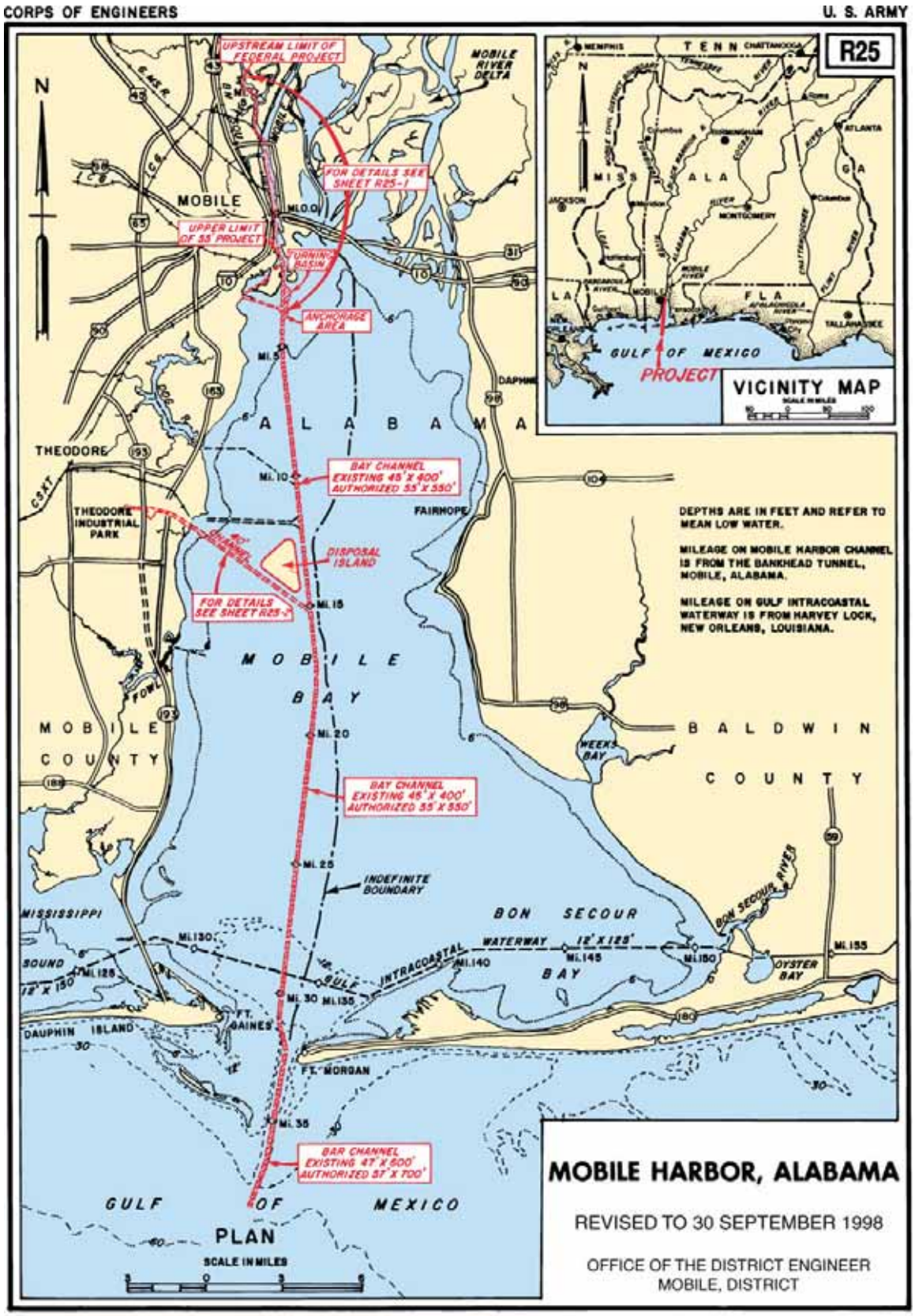

Figure 1. Mobile Harbor Federally Authorized Navigation Project

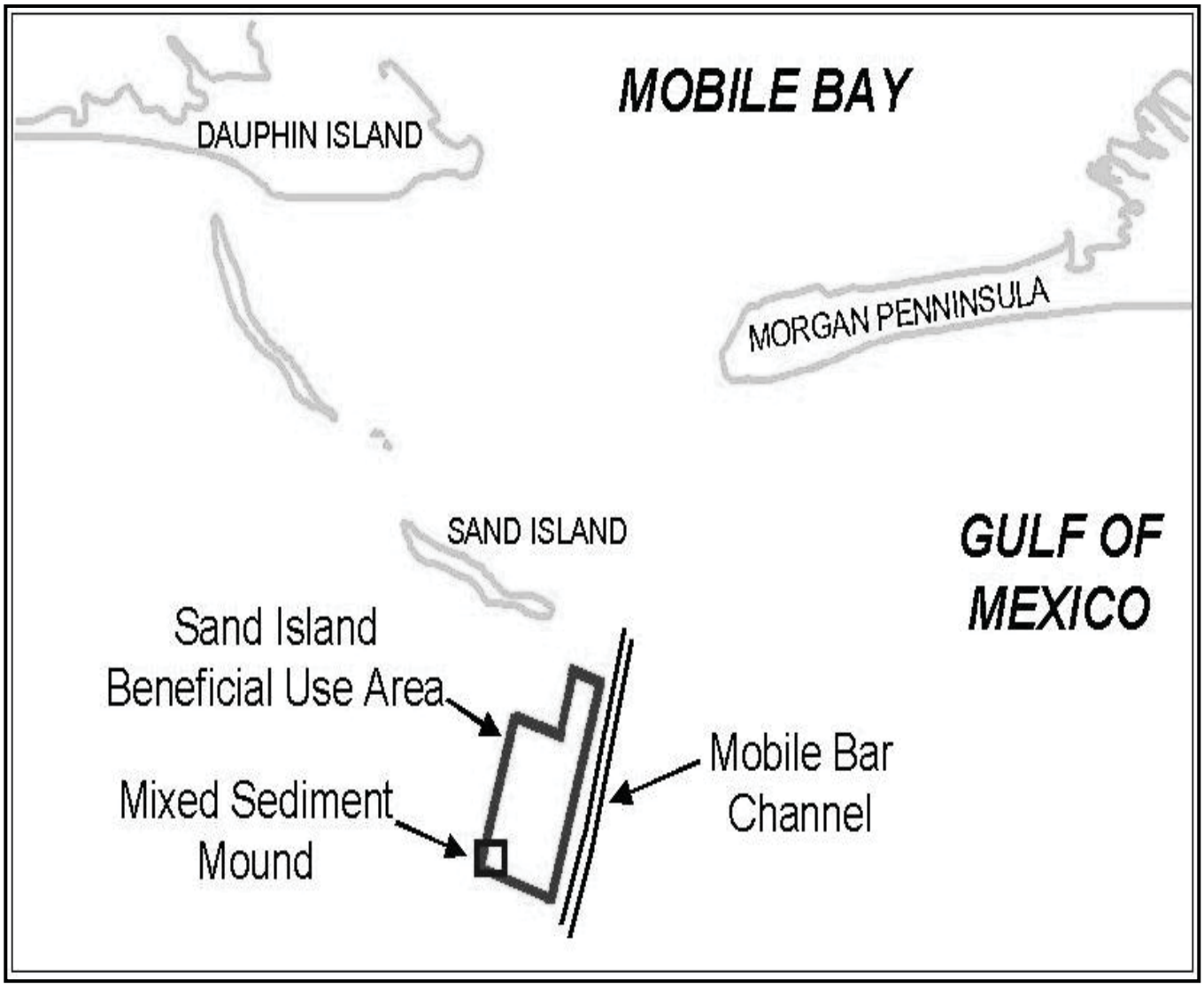

Figure 2. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

1.2 Purpose and Need for the Proposed Action. The primary objective and overall project purpose is to mitigate the long term impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico to Mobile Bay under the authority included below. The intent of this action is to prevent, as much as possible, submerged oil in the Gulf of Mexico from entering into the entrance of Mobile Bay. Doing so will provide protection to the fragile ecosystems and valuable natural resources that are an important and integral part of the Mobile Bay system. In addition to oil mitigation, the Corps feels that this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system and increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. It is believed this will provide protection to the Sand Island Lighthouse which is a valuable cultural resource.

1.3 Project Authorization. Sec 406 of P.L. 111-212 Supplemental Funds.

SEC. 406. (a) The Secretary of the Army may use funds made available under the heading ''OPERATION AND MAINTENANCE'' of this chapter to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

(b) The Secretary of the Army shall coordinate the placement of dredged material with appropriate Federal and Gulf Coast State agencies.

(c) The placement of dredged material pursuant to this section shall not be subject to a least-cost-disposal analysis or to the development of a Chief of Engineers report.

(d) Nothing in this section shall affect the ability or authority of the Federal Government to recover costs from an entity determined to be a responsible party in connection with the Deepwater Horizon Oil spill pursuant to the Oil Pollution Act of 1990 or any other applicable Federal statute for actions undertaken pursuant to this section.

1.4 Scope. This Environmental Assessment (EA) was prepared in accordance with Engineer Regulation (ER) 200-2-2, *Procedures for Implementing the National Environmental Policy Act (NEPA)* and the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations (CFR) Pts. 1500-1508). The objective of the EA is to determine the magnitude of the environmental impacts of the proposed storm protection and restoration actions. If such impacts are relatively minor, a Finding of No Significant Impact (FONSI) would be issued and the Mobile District, U.S. Army Corps of Engineers will proceed with the Federal action. If the environmental impacts are significant according to CEQ's criteria (40 CFR Pt. 1508.27), an Environmental Impact Statement (EIS) would be prepared before a decision is reached to implement the proposed action.

Applicable laws under which these impacts will be evaluated include the National Environmental Policy Act (NEPA), Endangered Species Act, the Clean Water Act, the Clean Air Act, the U.S. Fish and Wildlife Coordination Act, National Historic Preservation Act, Magnuson - Stevens Fishery Conservation and Management Act, and Coastal Zone Management Act.

1.5 Environmental Assumptions. The general environmental criteria for projects of this nature are identified in Federal environmental statutes, executive orders, planning guidelines, and the USACE Environmental Operating Principles (EOP). It is the national policy that ecosystem restoration, particularly that which results in conservation of fish and wildlife resources, be given equal consideration with other study purposes in the formulation and evaluation of alternative plans. The basic guidance during planning studies is to assure that care is taken to preserve and protect significant ecological and cultural resources, and to conserve natural resources. These efforts also should provide the means to maintain and restore, as applicable, the desirable qualities of the human and natural environment. Formulation of alternative plans should avoid damaging the environment to the extent practicable and contain measures to minimize or

mitigate unavoidable environmental damages. Consistent with laws and policy, alternative plans formulated should avoid damaging the environment to the extent practicable and contain measures to minimize or mitigate unavoidable environmental impacts.

EOPs have been established for evaluation of water resource projects. Throughout the evaluation process to ensure conservation, environmental preservation, and restoration is considered at the same level as economic issues. These principles are: 1) Strive to achieve environmental sustainability, 2) Consider environmental consequences, 3) Seek balance and synergy, 4) Accept responsibility, 5) Mitigate impacts, 6) Understand the environment, and 7) Respect other views. The following criteria were used to address environmental impacts during the evaluation of alternatives:

- Protection, preservation, and improvement of the existing fish and wildlife resources along with the protection and preservation of coastal and offshore habitat and water quality;

- Consideration in the project design of the least disruptive construction techniques and methods;

- Protection and preservation of endangered and/or threatened species, critical habitat, and EFH; and

- Preservation of significant historical and archeological resources through avoidance, if possible, or data recordation if destruction of the resources is necessary.

1.6 Applicable Environmental Laws and Regulations. Of primary concern is compliance with the Clean Water Act. Potential water quality impacts associated with the borrowing and placement of fill material associated with coastal operations must be considered. Such activities include evaluation of sediment from identified borrow sources for placement within the littoral zone within the study area. Borrow sediments identified as suitable must match, as closely as possible, the sediment characteristics at the nourishment site. This information will been utilized in the preparation of the Section 404(b)(1) evaluation report (APPENDIX A) and also in developing the management requirements to minimize impacts to threatened and/or endangered species under Section 7 of the Endangered Species Act.

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) identified habitats within the marine and estuarine areas of the U.S. that were essential to the management of certain specific fin and shellfish. Areas identified by the Gulf of Mexico Fishery Management Council as essential fish habitat (EFH) include all the marine and estuarine areas of Walton County. Consultation with the National Marine Fisheries Service (NMFS) focused on activities to minimize impacts to EFH. Of particular concern has been avoidance or minimization of impacts or the enhancement of EFH. Coordination with the FWS and NMFS concerning potential impacts to listed species is required and has been conducted for the selected project. Efforts have been made to include actions that would benefit the recovery of listed species.

All Federal activities affecting any land, water use, or natural resources of the coastal zone shall be carried out in a manner which is consistent, to the maximum extent practicable, with the enforceable policies of the Alabama Coastal Management Program. These activities have been evaluated to assess coastal zone management compliance. In addition, water quality certification (WQC) from the State of Alabama is required for all actions to be implemented. A WQC/CZC application has been submitted to the state and the necessary certifications have been obtained.

2.0 DESCRIPTION OF THE PROPOSED ACTION.

The Corps, Mobile District is responsible for the operations and maintenance (O&M) of the federally-authorized Mobile Harbor navigation project. Mobile Bay is an estuarine system approximately seven miles wide at the northern end and 30 miles wide at the southernmost end. It stretches approximately 30 miles long from the Mobile Delta to the Dauphin Island-Mobile Point entrance. It is situated at the mouth of the Mobile River basin, which drains approximately 44,000 square miles in Alabama, Mississippi, and Georgia. The bay is almost uniformly shallow with an average depth of about 9.5 feet. The Port of Mobile is on the western side of the Mobile River at the head of the bay. Three federally-authorized navigation channels cross the bay, the Mobile Ship Channel from north to south, the Gulf Intracoastal Waterway from east to west, and the Theodore Industrial Park from northwest to southeast. The southern-most portion of authorized navigation channel known as the Mobile Bar Channel extends approximately seven (7) miles from the Gulf of Mexico into Mobile Bay is typically maintained by a hopper dredge with the sandy material placed in the authorized Sand Island Beneficial Use Area *(*SIBUA) as shown in **Figure 2**.

The beneficial use area is located west of the Federal navigation channel and is intended to keep valuable sand removed from the bar channel in the local littoral system. In September 2004 a modification of the SIBUA was issued to expand the disposal site to include the area around the Sand Island Lighthouse (**Figure 3)**, which is a valuable cultural resource listed on the National Register of Historic Places. Placement of sandy material around the light house's rubble foundation is beneficial in that it provides protection to the historic structure. In order to continue the beneficial use practices, in December 2008 the Corps expanded the SIBUA extending a 4,500-foot wide southern boundary approximately 2,000 to the south, also illustrated in **Figure 3**. This expanded area provides for continued placement of sandy material from the Mobile Bar Channel in a manner that returns this material to the local littoral system.

Under the proposed Sand Island 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA (**Figure 4**) with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Actions for this effort will be over and above the District's normal maintenance dredging activities for the

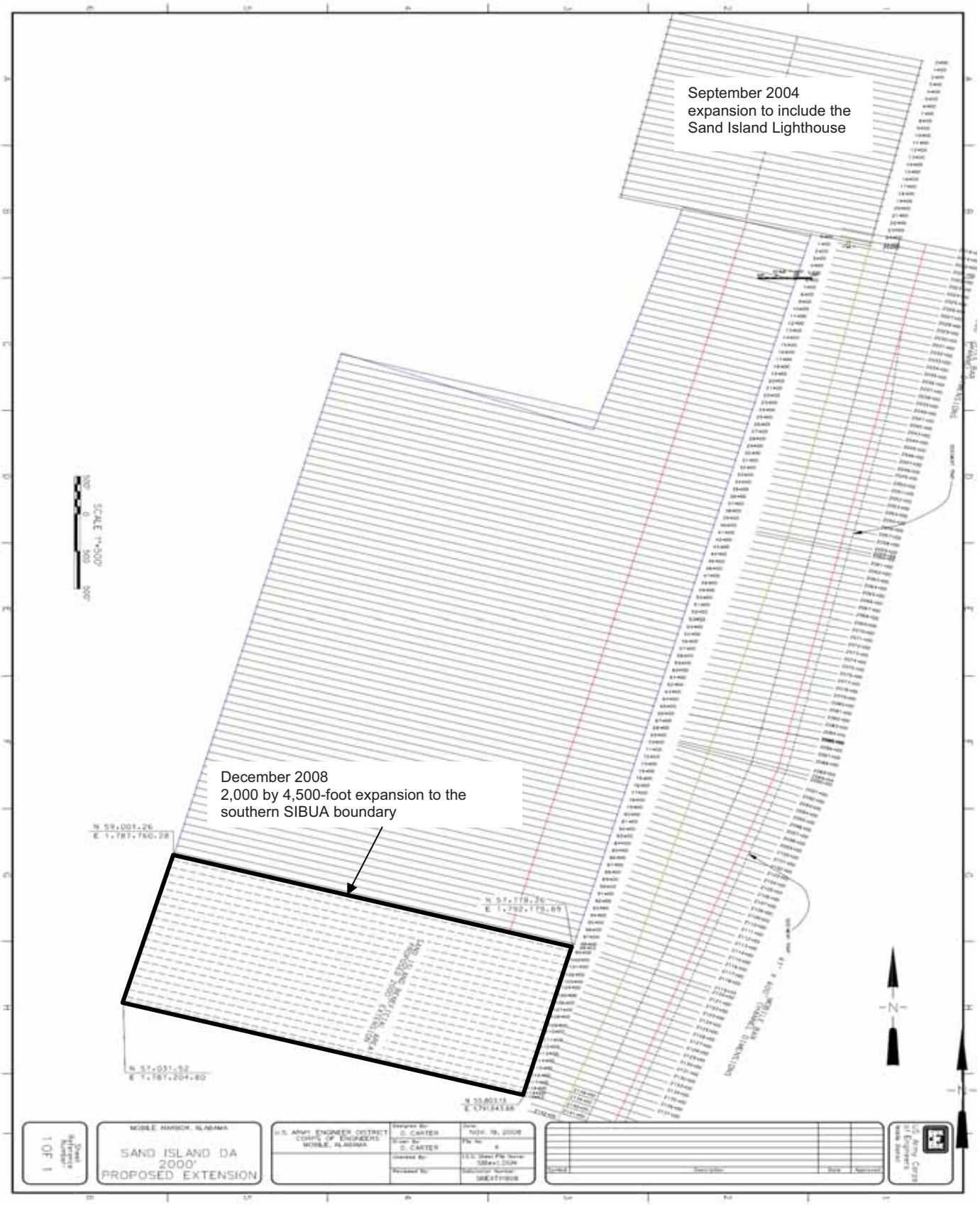

Figure 3. September 2004 and December 2008 SIBUA expansion areas.

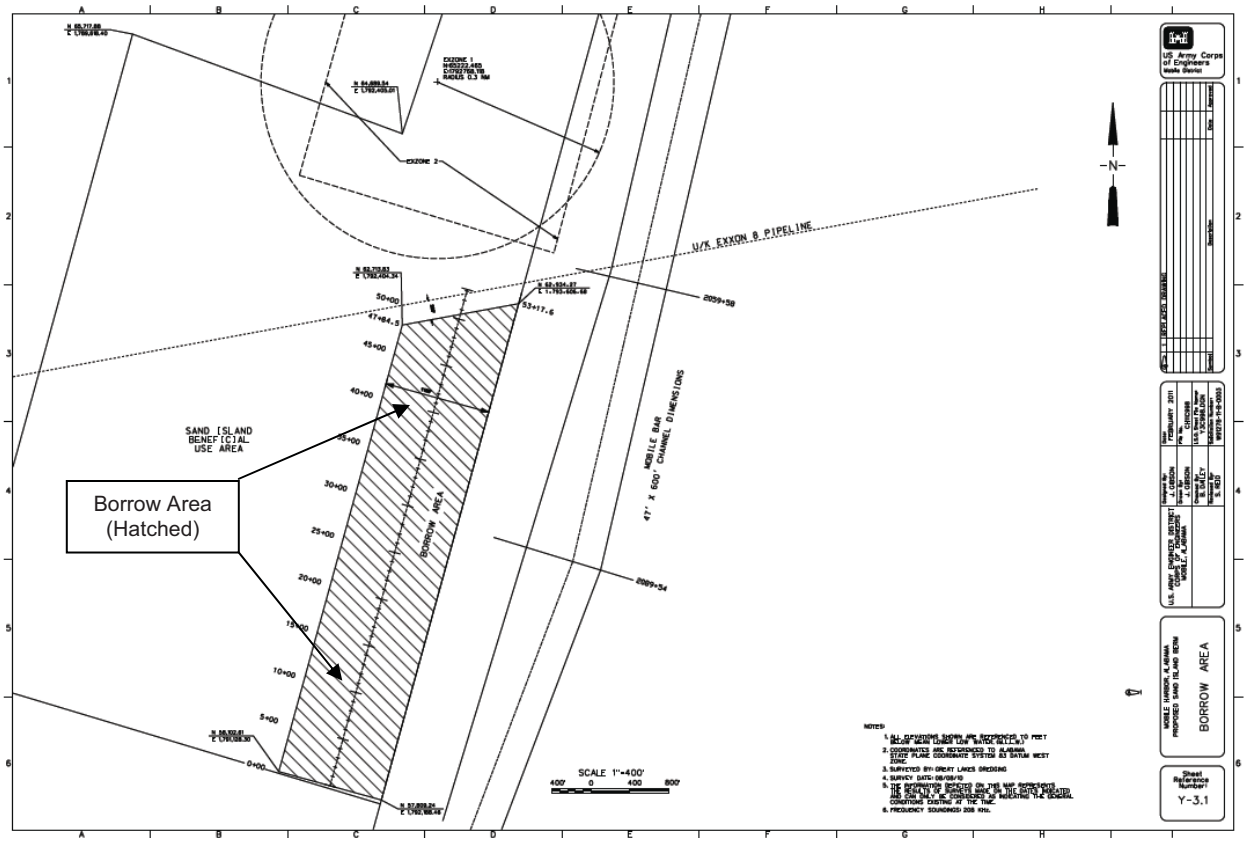

Figure 4. Proposed borrow area within the SIBUA

Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will reestablish the original Sand Island. The proposed Sand Island plan view is presented in **Figure 5** with the resulting cross sections illustrated in **Figure 6**. In addition to long term oil mitigation, the Corps feels that this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management implementation principles and goals. Also, it is believed that this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the light house will provide valuable protection to this historic structure.

It should be noted that the eastern end of the proposed restored Sand Island is actually within the existing SIBUA, therefore, the borrowed sandy sediments that will be placed to re-establish the island have been deemed compatible from a biological and physical standpoint according to guidelines established by the Corps and the U.S. Environmental Protection Agency (EPA). The placement activities will be accomplished by using either hopper dredges within pump-out capabilities or hydraulic pipeline dredges. The characteristics of the sediment being dredged and placed ranges from fine to medium-grained quartz sand from the Mobile Bay Bar navigation channel.

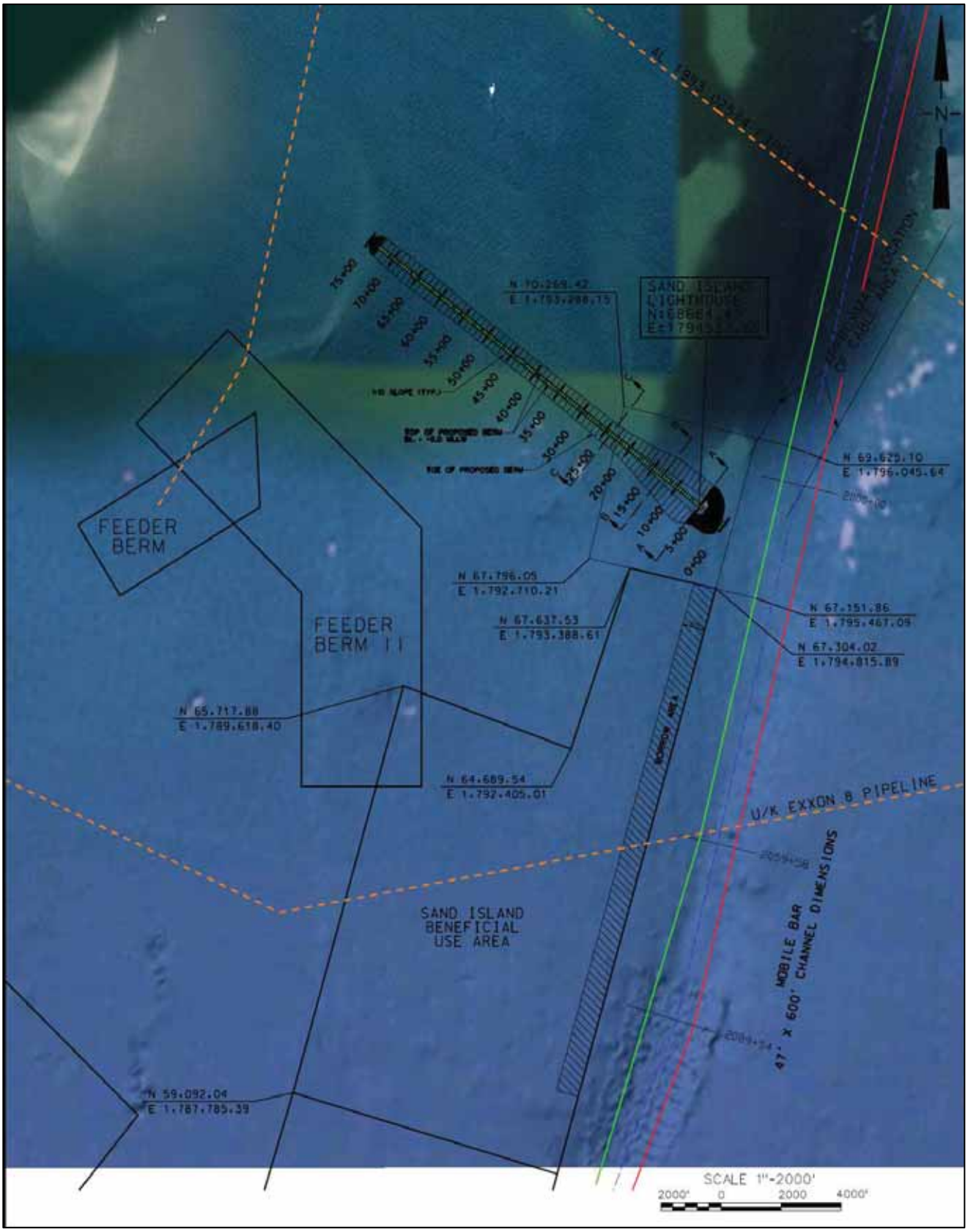

Figure 5. Proposed Sand Island plan view

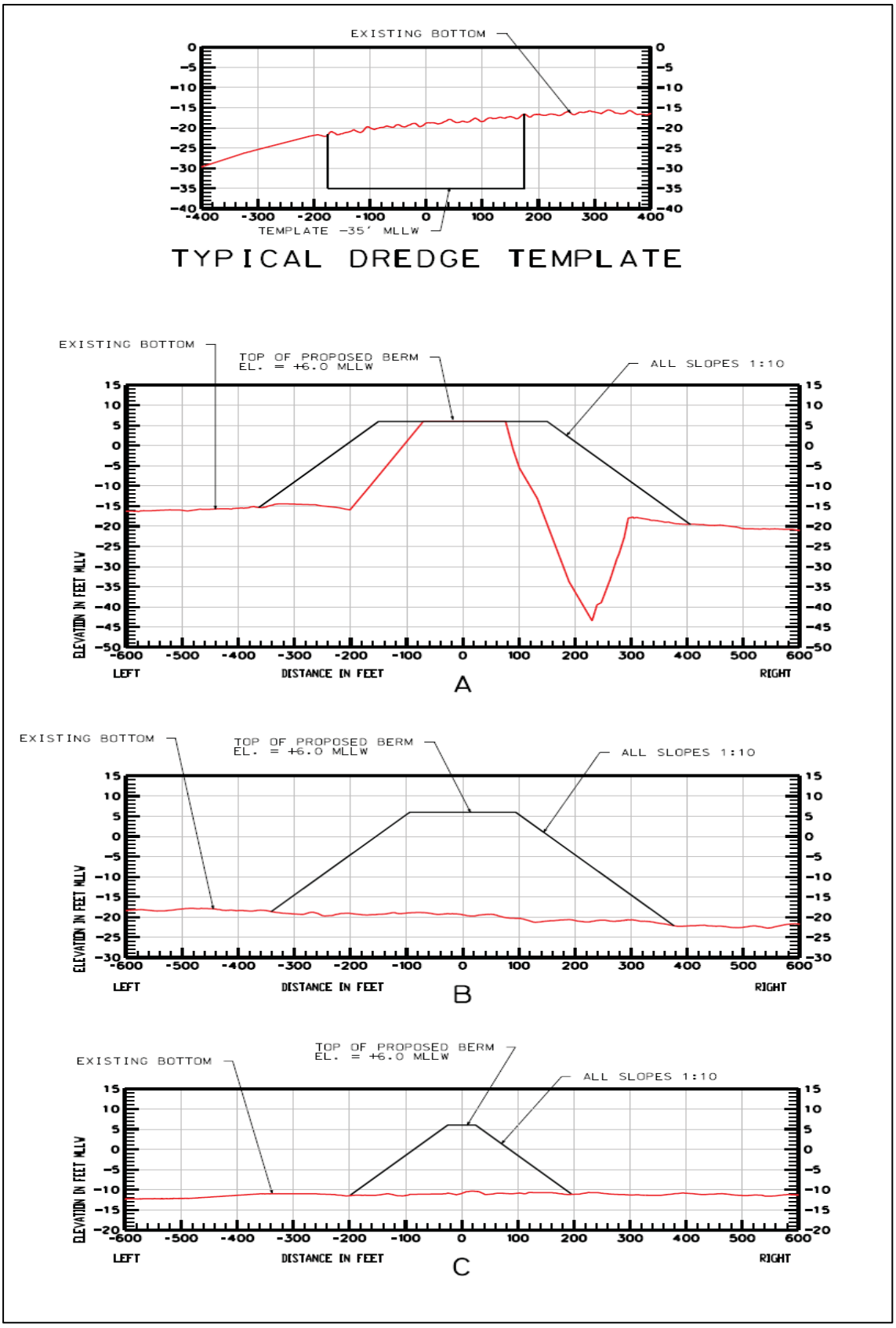

Figure 6. Proposed Sand Island cross sections

2.1 Alternatives. The funding for this effort has already been received. The authority clearly states that funds are already available to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

2.1.1 No Action. A no action alternative was considered in the determination of the impacts associated with mitigating the impacts of oil on Mobile Bay and associated natural resources. Future conditions associated with not providing long term oil mitigation efforts in the re-establishment of Sand Island would result in the potential continued degradation of a valuable natural resources and ecosystem associated with Mobile Bay. The already fragile habitats that are an integral part of the Mobile Bay system would remain particularly vulnerable to oil and degraded byproducts that pose a continuing threat to these coastal resources. Secondary opportunities would be also lost to accelerate the return of sediment into the local littoral system as well as losing the opportunity to provide protection of the Sand Island Lighthouse which is a valuable cultural resource. It has been determined that a no-action scenario would not provide the much needed long term protection from the threat of oil damage to Mobile Bay and its associated natural resources.

3.0 AFFECTED ENVIRONMENTAL RESOURCES

3.1 Fish and Wildlife Resources

*Oyster Reefs***.** Oyster reefs of commercial importance are subtidal and form aggregates that cover thousands of acres (1896 hectares of mapped oyster reef) of bay bottom throughout coastal Alabama. The primary oyster reefs of Alabama are located in the southwestern portion of Mobile Bay (Cedar Point, Sand Reef Buoy, Dauphin Island Bay, Kings Bayou, and Peavy Island Reef). Oyster reefs are also located to the east in Bon Secour Bay and to the west in Portersville Bay. There are additional small, scattered patches of oysters especially along the western shore of Mobile Bay in addition to the riparian beds located in Heron Bay and the Mississippi Sound (May 1971; Tatum *et al*. 1996).

Submerged Aquatic Vegetation. The Mobile Bay National Estuary Program funded a survey of submerged aquatic vegetation (SAV) in coastal Alabama in summer and fall 2002. This work included ground-truthed photo-interpreted aerial imagery of SAVs (Vittor and Associates, 2003). In the marine areas the 2002 SAV survey found shoal grass *Halodule wrightii* comprised most of the acreage, particularly in Mississippi Sound (819.4 acres) and southern Perdido Bay (299.6 acres, including Florida waters). In addition, relatively small patches of SAV occurred along the northern shoreline of the western end of Dauphin Island, and in Baldwin County in Little Lagoon, Bay la Launch, Arnica Bay, and Palmetto Creek.

Wetlands. Tidal marshes are located along the bay shorelines and the shoreline of the Mississippi Sound. These marshes are typically bordered along the waters edge by a strip of salt marsh grass, *Spartina alterniflora*, with scattered stands of *S. cynosuroides, S. patens, Distichilis spicata,* and *Phragmites communis*. The majority of the marsh inside of this strip is composed of *Juncus roemerianus* (Swingle, 1971). Within the vicinity of the project there are also a few isolated wetlands, some being densely vegetated with slash pine *Pinus elliotti*, a thick understory of titi *Cyrilla racemiflora*, and other shrubs.

Sediments. The sediments along the Mobile Harbor navigation channel consist of sand to clays with various mixtures of sand, silt, and clay located throughout the channel. Sediments are primarily composed of sands in the Bar Channel; a mix of estuarine silty clay and clay in Mobile Bay; and clays in the Mississippi Sound (Corps 1980). The current velocities range from about 8 inches per second (in/s) to 16 in/s near the SIBUA. The directions of the currents measured during the April survey (ebb tide conditions) moved towards the east while August directions (flood tide conditions) moved to the north-northwest (Kjerfve 1983).

3.2 Terrestrial Wildlife. Birds in the vicinity of the project may include: Gulls, pelicans, terns, sandpipers, plovers, stilts, skimmers, oystercatchers, herons, egrets and ibises.

3.3 Benthos, Motile Invertebrates, and Fishes. The benthic community in the Mississippi Sound and lower Mobile Bay was classified by Vittor and Associates in a study of the Mississippi Sound and selected sites in the Gulf of Mexico (Vittor, 1982). A total of 437 taxa were collected at densities ranging from 1,097 to 35,537 individuals per square meter. Generally, densities increase from fall through the spring months since most of the dominant species exhibit a late winter to early spring peak in production. These species, though sometimes low to moderate in abundance, occur in a wide range of environmental conditions. They are usually the most successful at early colonization and thus tend to strongly dominate the sediment subsequent to disturbances such as dredging activities. These species include polychaetes *Mediomastus spp*., *Paraprionospio pinnata*, *Myriochele oculata*, polychaete worm *Owenia fusiformi, Lumbrineris app.,Sigambra tentaculata*, the *Linopherus-Paraphinome* complex, and *Magelona cf. phyllisa*e. The *phoronid, Phoronis ap*. and the *cumacean Oxyurostylis* also fit this category. *M. oculata* and *O. fusiformis* are predominate species in the Mississippi Sound. The numerically dominant species collected during the study were polychaete worm *M. californiensis* and *P. pinnata*.

A number of studies evaluating the fish and invertebrates of Alabama estuaries have been conducted. These studies looked at species abundance and diversity in coastal waters. The nearshore and marsh species are comprised largely of fish in the families *Poeciliidae*, *Cyprinodontidae*, and *Atherinidae* which serve as the prey for the Southern flounder *Paralichthys lethostigma* and seatrout *Cynoscion spp.,* both important sport and commercial species. Common migratory fish in the study area are Atlantic croaker *Micropogonias undulatus*, spot *Leiostomus xanthurus*, and sand seatrout *Cynoscion arenarius*. Important forage fish within the area are the pelagic species; Bay anchovy *Anchoa mitchilli*, striped anchovy *Anchoa hepsetus*, and Gulf menhaden *Brevoortia patronus*. The most commercially important shellfish found in the area include the brown and white shrimp, blue crab, and American oyster (Swingle, 1971 and Swingle and Bland, 1974).

Most marine species considered to be of significant economic importance utilize open water areas of the Gulf of Mexico for spawning purposes rather than the confines of semi-enclosed estuaries. However, almost all of these species, except for anadromous forms, migrate seaward seasonally for spawning, then larvae and early juveniles return to the estuaries, which serve as nursery grounds. Estuaries provide larvae and juveniles with protective habitat, an influx of freshwater, a continuous mixing zone, and an abundance of food supply. This

phenomenon considered in this report is documented in scores of publications, but especially Christmas and Waller (1973), Loyacano and Smith (1979), and Benson (1982). This section evaluates potential impacts on several species as a result of expanding the SIBUA site for the disposal of dredged material.

Shipp (1983) documented this utilization activity by numerous species, such as the bay anchovy (*Anchoa mitchilli*), the speckled trout or spotted sea trout (*Cynoscion nebulosus*), and the red fish or red drum (*Sciaenops ocellatus*) in the immediate vicinity of the SIBUA. Pattillo et al (1997) summarized the life history and environmental tolerances for three species of shrimp in this region. The bay anchovy spawns throughout estuaries and nearshore Gulf of Mexico waters. Large numbers of these fish inhabit the lower estuaries and near-shore waters during warm months. The SIBUA and proposed Sand Island site does provide suitable spawning habitat for the bay anchovy but no data exists to indicate this particular site is more suitable than another. The SIBUA does not provide the only habitat necessary to maintain the existing population levels of the bay anchovy. Other areas in the Gulf of Mexico also provide the required habitat needed to maintain successful bay anchovy populations.

Spotted sea trout and red fish are species of concern to coastal states due to their game fish importance. The red drum is an important recreational species throughout its range. Juveniles generally live in estuaries and move to near-shore oceanic waters, such as the SIBUA and Sand island site, as they reach maturity (Pearson 1929). Adults range widely over the near-shore continental shelf waters throughout the year but apparently move to coastal waters to spawn (Overstreet 1983). Spawning is generally thought to take place in coastal waters near inlets (Jannke 1971, Holt et al. 1985) although Lyczkowski-Shultz et al. (1988) found eggs and larvae out to 20 miles from shore in the eastern Gulf of Mexico. It is believed that water temperature and salinity levels are more important to the spawning of the spotted sea trout than a specific location because newly hatched spotted sea trout will not survive low salinity and low temperature conditions. Optimum spawning conditions for spotted sea trout exist when salinity is 20 to 34 parts per thousand (ppt) and temperatures reach 70 to 90° Fahrenheit (F). Spawning takes place at night in coastal bays, sounds, and lagoons, near passes, and around barrier islands from March through November. Females may lay up to 10 million eggs. The eggs hatch within 20 hours and are transported to estuaries by winds and currents. Juveniles spend 2 to 4 years in shallow grassy areas and then tend to move into the near-shore passes and along beaches.

The SIBUA and proposed Sand Island site could possibly serve as a spawning site for these species since both are known to spawn in lower estuaries, in near-shore areas, and around barrier islands (Perret et al. 1980; Williams et al., 1980; Benson, 1982). In a literature review, Wade (1980) noted that earliest observations of this century data implied intra-estuarine spawning, while the more recent data, relying more heavily on empirical observations of the presence and transport of eggs and larvae, indicated that most spawning is really salinity dependent, and in fact more activity is concentrated just off the barrier islands than previously thought. Studies indicated large numbers of eggs and larvae of several species of the drum family, including both the spotted sea trout and red drum, are present around SIBUA. The passes into the Mobile Bay estuary are the lanes of transport for these larvae leading into the Bay. These passes are located near the vicinity of the SIBUA. Thus, strong evidence support that all near-shore areas are important spawning areas for these species, and the SIBUA is not

unique in their importance. Spawning location for the red drum is more definitive. Christmas and Waller (1973) report spawning of red drum outside of the Mississippi barrier islands, near to passes, and indicate no mature females have ever been taken in estuarine waters along their area of study.

Marine shrimp is by far the most popular seafood in the United States. There are many species of shrimp found in the Gulf of Mexico; however, only those of the family *Penaeidae* are large enough to be considered seafood. Brown shrimp (*Penaeus aztecus*), white shrimp (*P. setiferus*) and pink shrimp (*P. duorarum*) make up the bulk of Alabama shrimp landings.

The life cycles of brown, white and pink shrimp are similar. They spend part of their life in estuaries, bays and the Gulf of Mexico. Spawning occurs in the Gulf of Mexico. One female shrimp releases 100,000 to 1,000,000 eggs that hatch within 24 hours. The post-larvae shrimp develop through several larval stages as they are carried shoreward by winds and currents. Post-larvae drift or migrate to nursery areas within shallow bays, tidal creeks, and marshes where food and protection necessary for growth and survival are available. There they acquire color and become bottom dwellers. If conditions are favorable in nursery areas, the young shrimp grow rapidly and soon move to the deeper water of the bays. When shrimp reach juvenile and sub-adult stages (3-5 inches long) they usually migrate from the bays to the Gulf of Mexico where they mature and complete their life cycles. Most shrimp will spend the rest of their life in the Gulf. Several shrimpers actively fish in the vicinity of the SIBUA site for shrimp. However, shrimp is also actively fished outside of the boundaries of the site.

3.4 Essential Fish Habitat. Congress defines Essential Fish Habitat (EFH) as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity." The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The Gulf of Mexico Fishery Management Council (GMFMC) and National Marine Fisheries Service (NMFS) have identified EFHs for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, and mud, sand, shell, and rock substrates. In addition, marine areas, such as the water column, vegetated and non-vegetated bottoms, artificial and coral reefs, geologic features and continental shelf features have also been identified. The habitat within the vicinity of the project consists of open-water marine environment with a sandy bottom and subject to high wave action and currents.

Open-water and estuarine marshes provide habitat for various species of invertebrates and vertebrates. Epibenthic crustaceans and infaunal polychaetes dominate the diets of higher trophic levels, such as flounder, catfish, croaker, porgy, and drum. The fish species composition of the estuarine and offshore area along the northern Gulf of Mexico is of a high diversity due to the variety of environmental conditions, which exist within the area. The major fisheries landed along the Mississippi and Alabama Gulf coast are Spanish mackerel (*Scomberomerus maculatus*), king mackerel (*Scomberomerus cavalla*), cobia (*Rachycentron canadum*), bluefish (*Pomatomus saltatrix*), pompano (*Trachinotus carolinus*), little tunny (*Euthynnus alletteratus*), spotted sea trout (*Cynoscion nebulosus*), red drum (*Sciaenops ocellatus*), and several shark species. In addition, numerous species of less interest may be taken, including ladyfish (*Elops saurus*), crevalle jack (*Caranx hippos*), blue runner (*Caranx crysos*), and black drum (*Pogonias*

cromis). Trawlers work the area primarily for brown and white shrimp (*Peneus aztecus* and *P. setiferous*), but occasional trawlers seeking finfish species, including menhaden (*Brevoortia patronus*) and croaker (*Micropogonias undulatus*), as well as other industrial species may trawl this bottom (GMFMC-1998, 2004 and 2005, and Fishbase 2007).

The Mississippi Sound and adjacent waters have been identified as important nursery areas for nine sharks, primarily Atlantic sharpnose, blacktip, finetooth, and bull sharks. Less prevalent species are the spinner, blacknose, sandbar, bonnethead, and scalloped hammerhead. Typically sharks migrate inshore in the early spring around March and April, remain inshore during the summer months and then migrate offshore during the late fall around October. Most shark species in the Mississippi waters give birth during late spring and early summer, with young sharks spending just a few months of their life's in shallow coastal waters. Most shark species are abundant around barrier islands, with adult sharks commonly located south of the barrier islands (Carlson *et al*, 2003).

The species managed by the Gulf of Mexico Fishery Management Council are listed in **Table 1** below. Within the project area, EFH has been designated for managed species of Gulf of Mexico dolphin, wahoo, red drum, blue marlin, sharks (11 species), coastal migratory pelagics (3 species), reef fish (43 species), stone crab (2 species) and shrimp (4 species). No habitat areas of particular concern were identified for this area.

3.5 Threatened and Endangered Species. Several species of threatened and endangered marine mammals, turtles, fish and birds occur in the Gulf of Mexico off the coast of Alabama. The National Oceanic and Atmospheric Administration (NOAA) and USFWS lists the following species in **Table 2** as either threatened and/or endangered that may potentially occur within the project area:

3.6 Water Quality. Water quality within Mobile Bay, Mississippi Sound, and adjacent Gulf of Mexico is influenced by several factors, including the discharge of freshwater from rivers, seasonal climate changes, and variations in tide and currents. The primary driver of water quality is the rivers that feed into the Bay and Sound. Freshwater inputs from the local watersheds provide nutrients and sediments that serve to maintain productivity both in the Sound and in the extensive salt marsh habitats bordering estuaries of the Sound. The salt marsh habitats act to regulate the discharge of nutrients to coastal waters and serve as a sink for pollutants. Suspended sediments enter the Bay and Sound from fresh water sources, but are hydraulically restricted due to barrier islands and near shore areas. In addition, dynamic features such as the Loop Current, eddies, and river plumes create variations in temperature, salinity, and water density. Temperature and salinity strongly influence chemical, biological, and ecological patterns and processes. Differences in water density affect vertical ocean currents and may also concentrate buoyant materials such as detritus, and plankton. Greatest stratification in the water occurs in summer (Thompson et al., 1999).

The Alabama Department of Environmental Management (ADEM) has classified the coastal water in the project area as suitable for recreation, propagation of fish and wildlife and shellfish harvesting. Sufficient dissolved oxygen concentrations, water clarity, and typical salinity ranges with little to no stratification in the water column occur within this site. Water

quality within the project area is influenced mainly by non-point source pollution. According to the 2008 Section 303(d) list prepared by the ADEM, the main causes of water quality degradation within the area are pathogens, introduced into the system by urban runoff and storm sewers.

Table 1: Fishery Management Plans and Managed Species for the Gulf of Mexico. (NMFS 2008)

Shrimp Fishery Management Plan
- brown shrimp – *Farfantepenaeu aztecus*
- pink shrimp - *F. duorarum*
- royal red shrimp - *Pleoticus robustus*
- white shrimp - *Litopenaeus setiferus*

Reef Fish Fishery Management Plan
- almaco jack – *Seriola rivoliana*
- anchor tilefish - *Caulolatilus ntermedius*
- banded rudderfish – *S. zonata*
- blackfin snapper - *Lutjanus buccanella*
- blackline tilefish - *Caulolatilus cyanops*
- black grouper- *Mycteroperca bonaci*
- blueline tilefish – *C. microps*
- cubera snapper – *L. cyanopterus*
- dog snapper – *L. jocu*
- dwarf sand perch - *Diplectrum ivittatum*
- gag grouper - *M. microlepis*
- goldface tilefish – *C. chrysops*
- goliath grouper - *Epinephelus itajara*
- gray snapper – *L. griseus*
- gray triggerfish - *Balistes capriscus*
- greater amberjack – *S. dumerili*
- hogfish - *Lachnolaimus maximus*
- lane snapper - *Lutjanus synagris*
- lesser amberjack - *S. fasciata*
- mahogany snapper – *L. mahogoni*
- marbled grouper – *E. inermis*
- misty grouper – *E. mystacinus*
- mutton snapper – *L. analis*
- Nassau grouper – *E. striatus*
- queen snapper - *Etelis oculatus*
- red hind - *Epinephelus guttatus*
- red grouper – *E. morio*
- red snapper - *L. campechanus*
- rock hind – *E. adscensionis*
- sand perch - *Diplectrum formosum*
- scamp grouper - *M. phenax*
- schoolmaster – *L. apodus*
- silk snapper – *L. vivanus*
- snowy grouper – *E. niveatus*
- speckled hind - *E. drummondhayi*
- tilefish - *Lopholatilus chamaeleonticeps*
- vermilion snapper - *Rhomboplites aurorubens*
- Warsaw grouper – *E. nigritus*
- wenchman - *Pristipomoides aquilonaris*

Stone Crab Fishery Management Plan FL
- stone crab - *Menippe mercenaria*
- gulf stone crab – *M. adina*

Spiny Lobster Fishery Management Plan
- spiny lobster - *Panulirus argus*
- slipper lobster - *Scyllarides nodife*

Coral and Coral Reef Fishery Management Plan
- varied coral species and coral reef communities comprised of several hundred species

Coastal Migratory Pelagic Fishery Management Plan
- cobia - *Rachycentron canadum*
- king mackerel – *Scomberomorus cavalla*
- Spanish mackerel - *S. maculatus*

Red Drum Fishery Management Plan
- red drum - *Sciaenops ocellatus*

- yellowedge grouper *E .lavolimbatus*
- yellowfin grouper – *M. venenosa*
- yellowmouth grouper – *M. interstitialis*
- yeloowtail snapper – *Ocyurus chrysurus*

Table 2: Threatened and Endangered Species (NOAA and USFWS 2009)

LISTED SPECIES	SCIENTIFIC NAME	STATUS	DATE LISTED
Marine Mammals			
blue whale	*Balaenoptera musculus*	Endangered	12/02/70
finback whale	*Balaenoptera physalus*	Endangered	12/02/70
humpback whale	*Megaptera novaengliae*	Endangered	12/02/70
sei whale	*Balaenoptera borealis*	Endangered	12/02/70
sperm whale	*Physeter macrocephalus*	Endangered	12/02/70
West Indian manatee	*Trichechus manatus*	Endangered	03/11/67
Turtles			
green sea turtle	*Chelonia mydas*	Threatened1	07/28/78
hawksbill sea turtle	*Eretmochelys imbricata*	Endangered	06/02/70
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered	12/02/70
leatherback sea turtle	*Dermochelys coriacea*	Endangered	06/02/70
loggerhead sea turtle	*Caretta caretta*	Threatened	07/28/78
Fish			
Gulf sturgeon	*Acipenser oxyrinchus desotoi*	Threatened	09/30/91
Birds			
Piping Plover	*Charadrius melodus*	Threatened	12/11/85
Least Tern	*Sterna antillarum*	Endangered	05/28/85

3.7 Hazardous Material.

*Deepwater Horizon Oil Spill Impacts***.** On April 20, 2010, while working on an exploratory well approximately 50 miles offshore of Louisiana, the floating semi-submersible mobile offshore drilling unit Deepwater Horizon experienced an explosion and fire. The rig subsequently sank and oil and natural gas began leaking into the Gulf of Mexico. The total amount of oil and natural gas that has escaped into the Gulf of Mexico is yet to be finally determined. On September 19, the relief well process was successfully completed and the federal government declared the well "effectively dead". The spill has caused extensive damage to marine and wildlife habitats as well as the Gulf's fishing and tourism industries.

This spill has created uncertainty on whether future dredging operations will meet environmental compliance criteria and requirements for ocean disposal. The long term impacts of the oil spill on the northern Gulf Coast are uncertain at this time. This spill could potentially adversely impact USACE water resources projects and studies within the coastal area. Potential impacts could include factors such as changes to existing or baseline conditions, as well as changes to future-without and future with project conditions. The USACE will continue to monitor and closely coordinate with other Federal and state resource agencies and local sponsors in determining how to best address any potential problems associated with the oil spill that may adversely impact USACE water resources development projects/studies. This could include

revisions to this proposed action as well as the generation of supplemental environmental analysis and documentation for specific projects/studies as warranted by changing conditions.

3.8 Air Quality. Existing air quality in coastal Mobile and Baldwin counties was assessed in terms of types of sources contributing to emissions that are regulated by National Ambient Air Quality Standards (NAAQS). NAAQS have been developed for oxides of nitrogen, hydrocarbons, particulate matter, carbon monoxide, sulfur dioxide, lead, volatile organic compounds and other hazardous air pollutants. Sources of air pollution in the project area are mainly from non-point sources such as boat motors and vehicular traffic emissions. No major sources of air pollution were found within the vicinity of the project area. Mobile and Baldwin counties are in attainment for all NAAQS (Environmental Protection Agency, 2009).

3.9 Esthetics. SIBUA and the proposed Sand Island site are located offshore from any beach or recreational areas. The closest beachfront to the site is the dynamic barrier island (about 3.0 miles) known as Pelican Island, which is oriented southeastward to northeastward. This island is a popular boating designation for individuals operating out from the Mobile Bay or the Gulf Shore/Fort Morgan vicinity. The remote location of the island makes it a favorite spot to visit for boaters and overnight campers during the summer months. During cooler periods, very few visitors use it. Pelican Island has recently become connected to the Dauphin Island resulting from the natural local littoral transport processes. No structures of any substance are located there because it is vulnerable to storms and strong tides due the unconsolidated nature of the sediment and low relief (maximum about 9 feet). The island continually changes its contour in response to the meteorological and wave energy conditions and was severed in several places by Hurricane Frederic in September of 1979. Other tropical storms have also altered the shape of the island.

The closest developed resort to the SIBUA is Dauphin Island. Several hundred permanent residents populate Dauphin Island. However, the population increases during the summer months, due to the presence of several hundred vacation and resort homes, condominiums, and educational facilities. The island also attracts several thousand additional daytime visitors during weekends depending on local weather conditions. Despite populations described above, there is very little public access to the island's beaches. The majority of beachfront is privately owned, and the extreme western end of the island, which is undeveloped, has been fenced to prevent public access. Therefore, Dauphin Island cannot be considered a major resort/beach site for the general public. However, it is extensively developed for private ownership.

Even more remote from the SIBUA than either Sand or Dauphin Island is the Gulf Shores-Fort Morgan peninsula area. Actually, the extreme eastern tip of Fort Morgan peninsula is nearly the same distance from the site as is Dauphin Island, but the majority of this beachfront extends directly eastward. Gulf Shores and Fort Morgan have become a major Gulf Coast tourist attraction, with scores of condominiums and hotels/motels, and an ever-increasing westward moving wave of development. Private residents live year-round in Gulf Shores and Fort Morgan; however, the population escalates during the summer months due to the number of hotels, motels, and the condo and house rentals. Gulf Shores and Fort Morgan also attract snowbirds from the north for the wintering months.

3.10 Noise. Noise levels in the area are typical of recreational, boating, and fishing activities. Noise levels fluctuate with the highest levels usually occurring during the spring and summer months due to increased recreational activities.

3.11 Cultural Resources. Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended and implementing regulations 36 CFR Part 800 requires consultation with other agencies to avoid or minimize adverse effect on historical, architectural, archaeological, and cultural resource. In order to ensure compliance, cultural resources were evaluated via a literature review and remote sensing data which focused on archaeological resources (shipwrecks). The information gathered from these sources was used to characterize and assess the potential effects of the proposed project. The data search revealed that there were several possible ship wrecks in the vicinity of the SIBUA. No sites have been identified within the Bar Channel. One site has been identified as being of potential cultural importance within the SIBUA. All of the sites are currently covered with several feet of sand and have not been recently disturbed.

4.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

4.1 Fish and Wildlife Resources.

Oyster Reefs. No significant adverse impacts to oyster reefs from the continued operation and disposal of maintenance material in the SIBUA were identified in this evaluation. The closest oyster reefs are located several miles from the open water dredging and placement activities associated with this project.

Submerged Aquatic Vegetation. No significant impacts to the SAVs were identified in this evaluation. The closest known SAVs are located several miles from open water dredging and placement activities associated with this project and no SAVs are located within the expected 400-foot turbidity mixing zone of channel dredging.

Wetlands. Emergent wetlands are not located in the vicinity of the project and will not be impacted.

Sediments. There would be temporary disruption of the aquatic community caused by the dredging and placement activities. Dredging and disposal operations will result in the temporary increases of suspended sediments, the loss of benthic organisms, increases in nutrients, and bathymetry changes in the ocean bottom. The increase in turbidity will reduce light penetration through the water column, thereby reducing photosynthesis, surface water temperatures, and esthetics. These conditions could potentially alter visual predator-prey relations in the immediate project vicinity. In addition, sediment adheres to fish gills, resulting in respiratory stresses, and natural movement of eggs and larvae could be potentially altered as a result of the sediment adherence. However, the salinity of water associated with the proposed project area is high enough to promote rapid coagulation and settling of finer particles. Ninety-eight percent of discharged sediments from hydraulic dredging have been observed to settle out within 200 feet of discharge points during similar operations in the project vicinity (Corps 1978). All of these described impacts are temporary and are anticipated to return to previous conditions shortly after disposal operations. In addition, the Section 404(b)(1) Evaluation Report (**APPENDIX A**)

concluded that the proposed maintenance and dredging action will not jeopardize or adversely impact any oyster reefs, SAVs, wetlands or other critical habitat. The sediment quality and texture of the SIBUA dredged material is expected to be homogenous to that existing in at the proposed Sand Island site. This is due to their close proximity to each other.

The most vulnerable organisms during this action would be benthic animals, such as polychaete worms, shrimp, and crabs. Placement of dredged material could temporarily disrupt the benthic communities occupying these areas. However, populations of benthic organisms should reestablish within 12 months after placement occurs (Culter and Mahadevan, 1982). Adjacent benthic communities are anticipated to move into the dredged and placement site and begin re-colonization. It is anticipated that the natural ecological processes will, to the extent practicable, function at the site as they did prior to disturbance.

4.2 Terrestrial Wildlife. As a result of this evaluation, no adverse impacts to the terrestrial wildlife located in the vicinity of project were identified. This project is located several miles from the nearest land.

4.3 Benthos, Motile Invertebrates, and Fishes. There would be temporary disruption of the aquatic community caused by the dredging and open-water placement. Non-motile benthic fauna within the area would be destroyed by dredging and open water placement operations, but should repopulate upon project completion. Some of the motile benthic and pelagic fauna, such as crabs, shrimp, and fishes are able to avoid the disturbed area and should return shortly after the activity is completed. Larval and juvenile stages of these forms may not be able to avoid the activity due to limited mobility.

Rates of benthic community recovery observed after dredged material placement ranged from a few months to several years. The relatively species-poor benthic assemblages associated with low salinity estuarine sediments can recover in periods of time ranging from a few months to approximately one year (Leathem et al., 1973; McCauley et al., 1976 and 1977; Van Dolah et al. 1979 and 1984; Clarke and MillerWay, 1992), while the more diverse communities of high salinity estuarine sediments may require a year or longer (e.g. Jones, 1986; Ray and Clarke, 1999).

Open-water placement activities will result in the mounding of the sandy dredged material after it is released from the hopper dredge in a relatively thick layer. Deposits greater than 20-30 cm (8-12 in) generally eliminate all but the largest and most vigorous burrowers (Maurer et al., 1978). The sediment quality and texture of the channel dredged material are expected to be homogenous to that existing in the dredging and disposal areas, due to their close proximity to each other. Placement of material similar to the ambient sediments (e.g., sand on sand or mud on mud) has been shown to produce less sever, long-term impacts (Maurer et al. 1978, 1986). Temporary loss of benthic invertebrate populations would occur within the project footprint of the dredging and open water disposal areas.

Several studies of turbidity from total suspended solids (TSS) associated with dredging operations have concluded that dredging had no substantial effects on nekton (Ritchie, 1970; Stickney, 1972; Wright, 1978); however, other studies have shown that elevated TSS levels and

prolonged exposure can suffocate and reduce growth rates of adult and juvenile nekton and reduce viability of eggs (Moore, 1977; Stern and Stickle, 1978). Detrimental effects are generally recognized at TSS concentrations greater than 500 milligrams per liter (mg/L) and for durations of continuous exposure ranging from several hours to a few days. Turbidities exceeding 500 mg/L have been observed around maintenance dredging and placement operations (EH&A, 1978), and such turbidities may affect some aquatic organisms near the active dredges. In a study in Corpus Christi Bay, Schubal et al. (1978) reported TSS values greater than 300 mg/L but only in a relatively small area near the bottom. They also found that TSS from maintenance dredging in Corpus Christi Bay is not greater than that from shrimping and affects the bay for much shorter time periods. In a study of the Laguna Madre, Sheridan (1999) found elevations in turbidity only over the subtidal placement material fluid mud pile. In this study they found that even 16.5 feet from the edge of the placed material, turbidity was not statistically greater than that 1 kilometer or more away. May (1973) found that TSS was reduced by 92 percent within 100 feet of the discharge point, by 98 percent at 200 feet, and that concentrations above 100 mg/L were seldom found beyond 400 feet from the point of placement. Elevated turbidities during construction and maintenance dredging may affect some aquatic organisms near the dredging activity; however, turbidities in open-water habitats can be expected to return to near ambient conditions within a few hours after dredging ceases or moves out of a given area. Schidler (1984) reports similar TSS levels from dredging and storm events. Overall, motile organisms are mobile enough to avoid highly turbid areas (Hirsch et al., 1978). Under most conditions, fish and other motile organisms are only exposed to localized suspended-sediment plumes for short durations (minutes to hours) (Clarke and Wilber, 2000).

SIBUA and the Sand Island site does not provide important habitat that could not be found in other areas of the Gulf of Mexico. There is no significant resource at this site that is essential for the continued survival of any particular species. With the small area (percentage wise) of ecosystem that will be affected at a given point in time and the use open-water disposal methods being employed, no significant long-term impacts to the benthos, motile invertebrates, and fishes are expected to occur as a result of the proposed action. Therefore, it was determined that no adverse impacts to the aquatic community would result from the dredging of material from the SIBUA and subsequent placement at the Sand Island site.

4.4 Essential Fish Habitat (EFH). The Corps, Mobile District will take extensive steps to reduce and avoid potential impacts to EFH as well as other significant area resources. No estuarine emergent wetlands, oyster reefs, or SAVs would be adversely affected by the proposed action. Most of the motile benthic and pelagic fauna, such as crab, shrimp, and fish, should be able to avoid the disturbed area and should return shortly after the activity is completed. No long-term direct impacts to managed species of finfish or shellfish populations are anticipated. However, it is reasonable to anticipate some non-motile and motile invertebrate species will be physically affected through disposal operations. These species are expected to recover rapidly soon after the disposal operations are complete. As detailed in section 4.3 of this assessment, no significant long-term impacts to this resource is expected as result of this action.

Increased water column turbidity during dredging would be temporary and localized. The spatial extent of elevated turbidity is expected to be within 400 feet of the operation, with turbidity levels returning to ambient conditions within a few hours after completion of the

dredging activities. Due to the nature of dredging and disposal activities and the small area (percentage wise) of ecosystem that would be affected at a given point in time no significant long-term impacts are expected to occur.

In accordance with provisions of the Magnuson-Stevens Conservation and Management Act (Magnuson-Stevens Act) consultation with the NMFS, Habitat Conservation Division was completed by means of the public notice and by letter dated December 23, 2010. By email dated January 3, 2011 the NMFS concurred with our final determination that the project will not result in significant impacts to EFH.

4.5 Threatened and Endangered Species. Significant impacts to threatened and endangered species would be the loss of or long term reduction in the size of a population; a habitat modification that causes a permanent disruption to breeding, foraging or other life history requirement; permanent interference with the movement of native resident or migratory protected species; and loss of any area designated a critical habitat.

The whale species listed as threatened or endangered that could occur in the vicinity of the project area typically occur in the deeper waters off the continental shelf and would only venture through the project area as incidental transients. Any impacts to these species would be limited to annoyance and alteration of swimming patters to avoid the active dredging areas. Any such impacts would be negligible. The West Indian manatee migrates along the Gulf coast from Florida to Louisiana as a seasonal transient. The project area does not provide habitat requirements and it is very unlikely that the animal would be located that far out from shore. In the unlikely event that a manatee was located in the vicinity of the project site, “Standard Manatee Construction Conditions" would be implemented. The piping plover and least tern occur along the Gulf Coast and also may occur on Pelican Island or other nearby land forms. Since this project is located over water and away for any land forms, it is highly unlikely that these birds would be disrupted by the proposed project. In summary, any impacts to whales, manatees or shore birds would be temporary or negligible.

Through ongoing consultation with the NMFS and the USFWS the Corps, Mobile District has determined that five species of sea turtles (loggerhead, green, hawksbill, Kemp’s ridley, and leatherback), and Gulf sturgeon protected by the ESA can be found in or near the project area and may be affected by the project. These species will likely avoid the immediate project vicinity during dredging or sand placement due to noise from vessels and machinery; however these effects will be insignificant. Sea turtles and Gulf sturgeon may also be affected by dredging and disposal operations if they were to be struck by the dredge as it transits the site or by the movement of hydraulic pipelines; however, due to their mobility, the chance of this occurring is discountable. This project is not located within designated critical habitat for any of the listed species.

Activities associated with the removal of materials from the Mobile Bar Channel by hopper dredge have already been analyzed in the November 2003 Regional Biological Opinion (RBO) titled “Dredging of Gulf of Mexico Navigation Channels and Sand Mining (“Borrow”) Areas Using Hopper Dredges by Corps of Engineers (COE) Galveston, New Orleans, Mobile, and Jacksonville Districts” as amended and modified on June 24, 2005, and January 7 2009.

Potential impacts on the five species of listed sea turtles and Gulf sturgeon from hopper dredging activities were assessed in the 2003 RBO. In the opinion, NMFS concluded that sea turtles and Gulf sturgeon can be adversely affected by hopper dredges and included in Incidental Take Statement (ITS), pursuant to Section 7 of ESA. The ITS in the 2003 RBO contains reasonable and prudent measures with implementing terms and conditions to help minimize impacts of take; therefore any sea turtle or Gulf sturgeon take resulting from future maintenance dredging in Mobile Bar Channel will be assessed against the Annual ITS in the RBO.

The Corps, Mobile District made an assessment and determined that no federally-protected species or designated critical habitat were likely to be adversely affected as a result of the proposed project. In accordance with provisions of the Fish and Wildlife Coordination Act (FWCA) and the Endangered Species Act (ESA) of 1973, coordination with the U.S. Fish and Wildlife Service (FWS) was completed by means of the Public Notice. By email dated December 21, 2010, the FWS concurred that no significant adverse effects on fish and wildlife resources, under the Service's purview, are expected to result from this project. Also in accordance with the ESA, consultation with the NOAA, National Marine Fisheries Service (NMFS), Protected Resources Division was completed by means of the Public Notice. By email dated December 21, 2010, the NMFS agreed with the Corps' determination that this action is covered by the November 19, 2003 Regional Biological Opinion (RBO) entitled "Dredging of the Gulf of Mexico Navigation Channels and Sand Mining Areas Using Hopper Dredges (Consultation Number F/SER/2000/01287) and no further consultation was necessary.

4.6 Water Quality. The dredging and disposal operations are expected to create some degree of construction-related turbidity in excess of the natural condition in the proximity of the channel and placement site. Impacts from sediment disturbance during these operations are expected to be temporary, minimal and similar to conditions experienced during past routine operation and maintenance of the channel. The dredged material from SIBUA and placed at the Sand Island site will consist primarily of fine to medium-grained sands. This type of material has historically resulted in insignificant release potential for dissolved constituents that may potentially enter the water column. Suspended particles are expected to settle out within a short time, with no long-term measurable effects on water quality. No measurable changes in temperature, salinity, PH, hardness, oxygen content or other chemical characteristics are expected. SIBUA has been historically used for the disposal of sandy dredged material since 1997. Thus, the Mobile District does not anticipate any adverse impacts as a result of this action. In addition, a Water Quality Certification (WQC) and Coastal Zone Consistency (CZC) determination was requested from ADEM by letter dated March 10, 2011. Subsequently, ADEM issued the WQC and CZC determination by letter dated March 30, 2011.

4.7 Hazardous Materials. No hazardous materials are known to exist in the project area. The contractor would be responsible for proper storage and disposal of any hazardous materials, such as oils and fuels used during the dredging and disposal operation.

4.8 Air Quality. The proposed action would have no significant long-term affect on air quality. Air quality in the immediate vicinity of the construction equipment would be slightly affected for a short period of time by the fuel combustion and resulting engine exhausts. The exhaust emissions are considered insignificant in light of prevailing breezes and when compared to the

existing exhaust fumes from other vessels using the project area. Any air quality impacts would be temporary and negligible.

4.9 Esthetics. SIBUA is currently used by the Mobile District for the maintenance operations of the bar channel. Continued use of the SIBUA and re-establishment of Sand Island is not anticipated to have any adverse impacts to Pelican and Dauphin Islands, Gulf Shores, and Fort Morgan due to the distances of these sites from the disposal sites. Pelican Island should benefit from the activity due to the additional sand placed in the littoral system. SIBUA may be intensely trawled during offshore migrations in summer and early fall for fish and shrimp. Commercial and recreational vessels and dredges have concurrently utilized the same area in the past without incident. Only temporary degradation to the esthetic environment would occur as a result of the proposed action to the local environment. Impacts would primarily occur as a result of the physical presence of heavy equipment. Some minor increases in turbidity maybe noted in the immediate vicinity during dredging operations, but these increases would be minor and short term in nature.

4.10 Noise. Noise impacts from project equipment are expected to increase in the vicinity during maintenance dredging work as a result of engine noise from the dredge, and noise emitted from other job related equipment. While there is little that can be done to reduce noise during the operation, these impacts would be short term and restricted to the immediate vicinity of the activity. No long-term increase in noise would occur in or around the project area. Noise is not expected to be a significant impact.

4.11 Cultural Resources. During July and August of 2009, a remote sensing survey was conducted by the Corps, Mobile District on areas of SIBUA. The purpose of the survey was to identify cultural resources sites (most notably shipwrecks) within the disposal area boundaries. The survey work was conducted as part of the Corps' responsibility as outlined in Section 106 of the NHPA. In addition, the survey was discussed directly with the Alabama State Historic Preservation Officer (SHPO) and with the Marine Advisory Commission. The existing SIBUA includes several clusters of anomalies believed to be shipwrecks. SIBUA dredging activities associated with this project will coordinated with the SHPO to assure avoidance of these historic resources.

In accordance with Section 106 of the National Historic Preservation Act (NHPA), by letter dated January 18, 2011 the Alabama State Historic Preservation Officer (SHPO) responded and concurred with the public notice that the proposed Sand Island Oil Mitigation action would not adversely affect the historic Sand Island Lighthouse or other known cultural resources in the SIBUA. However, the SHPO subsequently requested additional information regarding sediment transport concerns associated with know ship wrecks in the vicinity. By letter dated January 21, 2011, the Corps' staff archeologist addressed their concerns and provided recommendations to assure the avoidance of known archeological sites. The SHPO responded by letter dated February 18, 2011 that if the coordinated 0.3-mile archeological exclusion zone (AEZ) is followed, then they concur that no cultural resources will be adversely affected by this action.

5.0 ENVIRONMENTAL CONSEQUENCES OF THE NO ACTION ALTERNATIVE. Future conditions associated with not providing long term oil mitigation efforts in the re-establishment of Sand Island would result in the potential continued degradation of valuable natural

resources and ecosystems associated with Mobile Bay. The already fragile habitats that are an integral part of the Mobile Bay system would remain particularly vulnerable to oil and oil byproducts that pose a continuing threat to these coastal resources. Secondary opportunities would be also lost to accelerate the return of sediment into the local littoral system as well as losing the opportunity to provide protection of the Sand Island Lighthouse which is a valuable cultural resource. It has been determined that a no-action scenario would not provide the much needed long term protection from the threat of oil damage to Mobile Bay and its associated natural resources.

6.0 CUMULATIVE EFFECTS SUMMARY. Federal regulations implementing the NEPA (40 CFR Sections 1500-1508) require that the cumulative impacts of a Proposed Action be assessed. NEPA defines cumulative effects as an "impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or nonfederal) or person undertakes such other actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. This section analyzes the proposed action as well as any connected, cumulative, and similar existing and potential actions occurring in the area and surrounding the site.

The Corps is required by Congress to maintain the federally-authorized Mobile Harbor navigation channel and MHTB to provide safe navigation for commercial and recreational vessels. The oil mitigation in the form of the re-establishment of Sand Island is essential for protection of the valuable natural resources within Mobile Bay and Mississippi Sound. Future development of the surrounding area would likely proceed under the "no action" or the "preferred action" plan as development in the immediate area of Mobile Bay is not specific to the proposed action but connected with existing local attractions and urbanization of the area. Thus, the re-establishment of Sand Island is expected to have no significant direct cumulative impacts to biological resources, water chemistry, or oceanographic resources. Future conditions associated with not providing long term oil mitigation efforts in the re-establishment of Sand Island would result in the potential continued degradation of valuable natural resources and ecosystems associated with Mobile Bay.

7.0 OTHER CONSIDERATIONS

7.1 Coastal Zone Management Act of 1972. The Corps, Mobile District determined that the proposed action is consistent with the Alabama Coastal Management Program to the maximum extent practicable. A Coastal Zone Consistency determination has been requested from the State of Alabama by letter dated March 10, 2011. Subsequently, by letter dated March 30, 2011 a CZC determination was issued by ADEM stating that the action is consistent with the State's coastal zone management practices.

7.2 Clean Water Act of 1972. No work would occur until the State has issued water quality certification for the proposed action. It is expected that all State water quality standards will be met. Section 401 water quality certification was requested from the ADEM for the proposed action by letter dated March 10, 2011. A Section 404(b)(1) evaluation report has been prepared and is included in **APPENDIX A** of this EA. By letter dated March 30, 2011, the State of Alabama issued the WQC.

7.3 Rivers and Harbors Act of 1899. The proposed work would not obstruct navigable waters of the United States.

7.4 Marine Mammal Protection Act of 1972, as amended. Incorporation of the safe guards used to protect threatened or endangered species during project implementation will also protect any marine mammals in the area; therefore, the project is in compliance with this Act.

7.5 Fish and Wildlife Coordination Act of 1958, as amended. This project was coordinated with the FWS, and is in full compliance with the act.

7.6 E.O. 11988, Protection of Children. The proposed action complies with Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risk*s*", and does not represent disproportionally high and adverse environmental health or safety risks to children in the United States.

The proposed action is located in open-water and uninhabited; thus, no changes in demographics, housing, or public services would occur as a result of the proposed project. With respect to the protection of children, the likelihood of disproportionate risk to children is not significant. Re-designating the disposal site does not involve activities that would pose any disproportionate environmental health risk or safety risk to children.

7.7 E.O. 11990, Environmental Justice. The proposed action complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", and does not represent disproportionally high and adverse human health or environmental effects on minority populations and low-income populations in the United States.

The proposed action is not designed to create a benefit for any group or individual. The expansion and disposal activities do not create disproportionately high or adverse human health or environmental impacts on minority or low-income populations of the surrounding community. Review and evaluation of this action has not disclosed the existence of identifiable minority or low-income communities that would be adversely impacted by the proposed project.

8.0 COORDINATION. The general public was notified of the proposed action via Public Notice No. FP10-MH15-10 on December 20, 2010. The public notice was emailed to Federal and state agencies and the interested public and included a 30-day review period. All comments on the action have been considered prior to a decision on the action. A legal notice was published in the Press Register January 28, 2011.

9.0 CONCLUSION. The proposed oil mitigation for the re-establishment of Sand Island would have no significant environmental impacts on the existing environment. No mitigation actions are required for the proposed project. The implementation of the proposed action would not have a significant adverse impact on the quality of the environment and an environmental impact statement is not required. Future conditions associated with not providing long term oil mitigation efforts in the re-establishment of Sand Island would result in the potential continued degradation of a valuable natural resources and ecosystem associated with Mobile Bay. The already fragile habitats

that are an integral part of the Mobile Bay system would remain particularly vulnerable to oil and oil byproducts that pose a continuing threat to these coastal resources.

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APPENDIX A

SECTION 404 (b)(1) EVALUATION REPORT

SAND ISLAND 406 OIL MITIGATION

MOBILE, ALABAMA

FEDERALLY AUTHORIZED

I. **PROJECT DESCRIPTION**:

A. **Location:** The oil mitigation re-establishment of Sand Island is located southeast of Pelican Island along the west side of the Mobile Bar Channel and adjacent to the Sand Island Lighthouse in the Gulf of Mexico, Mobile County, Alabama. (**Figure 1 and 2)** of the Environmental Assessment [EA]).

B. **General Description:** For the proposed Sand Island 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Actions for this effort will be over and above the District's normal maintenance dredging activities for the Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. The proposed Sand Island plan view and resulting cross sections are presented in **Figures 4 and 5** of the EA. In addition to oil mitigation, the Corps feels that this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management implementation principles and goals. Also, it is believed that this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the light house will provide valuable protection to this historic structure.

It should be noted that the eastern end of the proposed restored Sand Island is actually within the existing SIBUA, therefore, the borrowed sandy sediments that will be placed to re-establish the island have been deemed compatible from a biological and physical standpoint according to guidelines established by the Corps and the U.S. Environmental Protection Agency (EPA). The placement activities will be accomplished by either using hopper dredges within pump-out capabilities or hydraulic pipeline dredges. The characteristics of the sediment being dredged and placed ranges from fine to medium-grained quartz sand from the Mobile Bay Bar navigation channel.

C. **Authority and Purpose:** Sec 406 of P.L. 111-212 Supplemental Funds.

SEC. 406. (a) The Secretary of the Army may use funds made available under the heading ''OPERATION AND MAINTENANCE'' of this chapter to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

(b) The Secretary of the Army shall coordinate the placement of dredged material with appropriate Federal and Gulf Coast State agencies.

(c) The placement of dredged material pursuant to this section shall not be subject to a least-cost-disposal analysis or to the development of a Chief of Engineers report.

(d) Nothing in this section shall affect the ability or authority of the Federal Government to recover costs from an entity determined to be a responsible party in connection with the Deepwater Horizon Oil spill pursuant to the Oil Pollution Act of 1990 or any other applicable Federal statute for actions undertaken pursuant to this section.

D. **General Description of Dredged or Fill Material:**

(1) **General Characteristics of Material:** The material to be dredged and placed in the proposed Sand Island site will be maintenance dredged material from the bar channel and turning basin. The dredged material from the SIBUA will be sandy sediments and composed predominantly of medium and fine-grained quartz sand.

(2) **Quantity and Source of Material:** It is estimated approximately 1 to 2 million cubic yards (cys) sandy material will be removed from the SIBUA and used for the re-establishment of Sand Island. The project will also provides the option for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel.

E. **Description of the Proposed Discharge Site:**

(1) **Location:** The discharge site is located around the Sand Island Lighthouse continuing to the east toward Pelican and Dauphin Islands in the Gulf of Mexico, Mobile County, Alabama. The Sand Island site is presented in **Figure 4** of the EA.

(2) **Size:** The footprint of the proposed Sand Island site can be seen in **Figure 4** of the EA

(3) **Type of Site:** The borrow site is a previously authorized open-water beneficial use area.

(4) **Type of Habitat:** The proposed disposal site is characterized by predominantly fine to medium quartz sand that is white to tan in color. It is part of the ebb tide shoal associated with the mouth of Mobile Bay. It is a very dynamic environment that changes drastically as a function of climate and wave conditions. The direction of littoral transport is from east to west. The constantly shifting sediments do not allow aquatic vegetation to become rooted or attached to the unconsolidated sandy substrate. No submerged aquatic vegetation or oyster reefs are present at this site.

(5) **Timing and Duration of Discharge:** The dredging placement activities for this project can occur any time of the year.

F. **Description of the Disposal Method:** Placement will be accomplished by a hopper dredge with pump-out capabilities and in some instances may be conducted using a pipeline dredge.

II. **Factual Determinations (Section 230.11)**:

A. **Physical Substrate Determinations:**

(1) **Substrate Elevation and Slope:** The footprint and resulting cross sections can be seen in **Figures 4 and 5** of the EA.

(2) **Sediment Type:** All material dredged from the SIBUA and placed on the Sand Island site is fine to medium quality quartz sand consistent with the near shore areas along the northern Gulf of Mexico.

(3) **Dredged/Fill Material Movement**. The dredged material placed to re-establish Sand Island would be subject to movement in the littoral system. This movement would occur on a continuous basis depending upon wave action, climate and the frequency of storm events. The predominant sediment transport pattern in this area is from east to west. The intent of this action is to prevent, as much as possible, submerged oil in the Gulf of Mexico from entering into the entrance of Mobile Bay. Doing so will provide protection to the fragile ecosystems and valuable natural resources that are an important and integral part of the Mobile Bay system. Additionally, placement of the sand at the proposed site will allow the sand to return to the littoral system and migrate west, thus, providing benefits to the local environment.

(4) **Physical Effects on Benthos**. It is certain that some benthic organisms would be destroyed by the proposed action; however, due to the constant movement of material by currents, benthic organism diversity and abundance would appear to be low. Research conducted by the U.S. Army Corps of Engineers, Engineering, Research and Development Center (ERDC) under the Dredged Material Research Program suggests that the benthic community is adapted to a wide range of naturally occurring environmental changes and that no significant or long-term changes in community structure or function are expected.

(5) **Other effects**. No other effects are anticipated.

(6) **Actions Taken to Minimize Impacts (Subpart H)**. No actions that would further reduce impacts due to the placement of the dredged material are deemed necessary.

B. **Water Column Determinations:**

(1) **Salinity**. There would be no change in salinity gradients or patterns.

(2) **Water Chemistry (pH, etc.)**. No effect.

(3) **Clarity**. Minor increases in turbidity may be experienced in the immediate vicinity of the project during disposal operations. However, these increases will be temporary and would return to pre-project conditions shortly after completion.

(4) **Color**. No effect.

(5) **Odor**. No effect.

(6) **Taste**. No effect.

(7) **Dissolved Gas Levels**. Temporary decreases in dissolved oxygen could likely result from the operations depending on timing of discharge. If decreases occur, they will be of a short duration. No significant effect to the water column is anticipated.

(8) **Nutrients**. Slight increases in nutrient concentrations may occur; however, these would rapidly return to normal. These described increases would have no significant effect to the water column.

(9) **Eutrophication**. No effect.

C. **Water Circulation, Fluctuation, and Salinity Gradient Determinations:**

(1) **Current Patterns and Circulation.**

(a) **Current Patterns and Flow**. Placement of dredged material into the open-water disposal site would have no effect on current patterns and flow in the vicinity of the project area.

(b) **Velocity**. No effect.

(2) **Stratification**. No effect.

(3) **Hydrologic Regime**. No effect.

(4) **Normal Water Level Fluctuations**. No effect.

(5) **Salinity Gradient**. No effect on the salinity gradient is anticipated.

D. **Suspended Particulate/Turbidity Determination:**

(1) **Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Placement Site:** Suspended particulate and turbidity levels are expected to undergo minor increases during dredging and placement activities, however, suspended sediment of this type will quickly fall out of the water column and return to normal conditions. No significant effects would occur as a result of these increases. Turbidity during disposal is not expected to violate State water quality certification conditions.

(2) **Effects on Chemical and Physical Properties of the Water Column:**

(a) **Light Penetration**. Increased turbidity levels in the project area as a result of the placement of dredged material would reduce the penetration of light into the water column only slightly and would be a minor short-term impact.

(b) **Dissolved Oxygen**. No significant effects.

(c) **Toxic Metals and Organics**. No effects.

(d) **Pathogens**. No effect.

(e) **Esthetics**. Placement of dredged material would likely decrease the esthetic qualities of the project area for a short period of time during and shortly after placement. The disposal areas equilibrate and rapidly return to normal upon exposure to the wave climate.

(3) **Effects on Biota:**

(a) **Primary Production Photosynthesis**. No significant effects.

(b) **Suspension/Filter Feeders**. No significant effects.

(c) **Sight Feeders**. No significant effects.

(4) **Actions Taken to Minimize Impacts (Subpart H)**. No further actions are deemed appropriate.

D. **Contaminant Determinations**.

*Deepwater Horizon Oil Spill Impacts***.** On April 20, 2010, while working on an exploratory well approximately 50 miles offshore of Louisiana, the floating semi-submersible mobile offshore drilling unit Deepwater Horizon experienced an explosion and fire. The rig subsequently sank and oil and natural gas began leaking into the Gulf of Mexico. The total amount of oil and natural gas that has escaped into the Gulf of Mexico is yet to be finally determined. On September 19, the relief well process was successfully completed and the federal government declared the well "effectively dead". The spill has caused extensive damage to marine and wildlife habitats as well as the Gulf's fishing and tourism industries.

This spill has created uncertainty on whether future dredging operations will meet environmental compliance criteria and requirements for ocean disposal. The long term impacts of the oil spill on the northern Gulf Coast are uncertain at this time. This spill could potentially adversely impact USACE water resources projects and studies within the coastal area. Potential impacts could include factors such as changes to existing or baseline conditions, as well as changes to future-without and future with project conditions. The USACE will continue to monitor and closely coordinate with other Federal and state resource agencies and local sponsors in determining how to best address any potential problems associated with the oil spill that may adversely impact USACE water resources development projects/studies. This could include revisions to this proposed action as well as the generation of supplemental environmental analysis and documentation for specific projects/studies as warranted by changing conditions.

F. **Aquatic Ecosystem and Organism Determinations:**

(1) **Effects on Plankton**. No significant effects.

(2) **Effects on Benthos**. Benthic organisms would be destroyed by the dredging and placement material below the waterline in the project areas, but no long-term effects are expected on the benthic community as a result of the proposed action.

(3) **Effects on Nekton**. No significant effects.

(4) **Effects on Aquatic Food Web**. No significant effects.

(5) **Effects on Special Aquatic Sites**. No effect.

(a) **Sanctuaries and Refuges**. No effect.

(b) **Wetlands**. No effect.

(c) **Mud Flats**. Not applicable.

(d) **Vegetated Shallows**. Not applicable.

(e) **Coral Reefs**. Not applicable.

(f) **Riffle and Pool Complexes**. Not applicable.

(6) **Effects on Threatened and Endangered Species**. Through consultation with the National Marine Fisheries Service (NMFS) Protected Resource Division (PRD) and the U.S. Fish and Wildlife Service (USFWS) the Corps, Mobile District has determined that the following threatened and endangered species: Gulf sturgeon; West Indian manatee; and the leatherback, hawksbill, loggerhead, green and Kemp's ridley sea turtles may be affected by the project action. Coordination has been completed with NMFS and USFWS requesting concurrence with the District's Not Likely to Adversely Affect (NLAA) any listed endangered and/or threatened

species or their associated critical habitat. Both the NMFS and FWS concurred with this determination.

(7) **Effects on Other Wildlife**. No significant effects.

(8) **Actions to Minimize Impacts**. No other actions to minimize impacts on the aquatic ecosystem are deemed appropriate.

G. **Proposed Disposal Site Determinations:**

(1) **Mixing Zone Determination**. The Alabama Department of Environmental Management (ADEM) specified a mixing zone for turbidity compliance of up to 400 feet from the activity and an increase of 50 NTUs above background turbidity levels. The Corps, Mobile District, will adhere to that turbidity requirement.

(a) **Depth of water at the disposal site**. Depths of water at the site vary from 23 to 46 feet.

(b) **Current velocity, direction, and variability at the disposal site**. Not significant.

(c) **Degree of turbulence**. Not significant.

(d) **Stratification attributable to causes such as obstructions, salinity or density profiles at the disposal site**. No effect.

(e) **Discharge vessel speed and direction, if appropriate**. No effect.

(f) **Rate of discharge**. Rate of discharge will vary according to the particular type of dredge disposing of the material.

(g) **Ambient concentrations of constituents of interest**. Not applicable.

(h) **Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities.** The proposed action would involve open-water disposal of dredged material consisting of marine sand from the Mobile Bar Channel and SIBUA. Sand from the bar channel is predominantly white to light brown and consists of fine to medium quartz sand. Rapid settling of the sandy material is anticipated.

(i) **Number of discharge actions per unit of time**. The number of discharge actions per unit of time will vary depending upon the particular disposal activity.

(2) **Determination of Compliance with Applicable Water Quality Standards**. The proposed activity is in compliance with all applicable water quality standards. Water Quality Certification and Coastal Zone Consistency will be requested from ADEM for this project.

(3) **Potential Effects on Human Use Characteristics**.

(a) **Municipal and Private Water Supply**. No effect.

(b) **Recreational and Commercial Fisheries**. Recreational and commercial fishing would be temporarily impacted primarily as a result of the physical presence of heavy equipment during operation activities.

(c) **Water Related Recreation**. No significant effects.

(d) **Aesthetics**. No significant effects.

(e) **Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves**. Placement of the material will include the area around Sand Island Lighthouse which is a valuable cultural resource listed on the National Register of Historic Places. There should be no impact to this structure or any other archeological resources.

(f) **Other Effects**. No effect.

H. **Determination of Cumulative Effects on the Aquatic Ecosystem**. The proposed action is not expected to have significant cumulative adverse impacts.

I. **Determination of Secondary Effects of the Aquatic Ecosystem**. The proposed action is not expected to have any significant secondary adverse effects on the aquatic ecosystem.

III. **Finding of Compliance with the Restrictions on Discharge:**

A. No significant adaptations of the Section 404(b)(1) guidelines were made relative to this evaluation.

B. The proposed discharge represents the least environmentally damaging practicable alternative.

C. The planned dredging and placement of materials would not violate any applicable State water quality standards; nor will it violate the Toxic Effluent Standard of Section 307 of the Clean Water Act (CWA). The permit was received from ADEM on March 30, 2011 for Section 410 Water Quality Certification and Coastal Zone Consistency.

D. The oil mitigation action will not jeopardize the continued existence of any federally-listed endangered or threatened species or their critical habitat provided the specified conditions in this document are implemented during maintenance dredging and disposal operations.

E. The proposed placement of fill material will not contribute to significant degradation of

waters of the United States, nor will it result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing; life stages of organisms dependent upon the aquatic ecosystem; ecosystem diversity, productivity and stability; or recreational, aesthetic or economic values.

F. Appropriate and practicable steps will be taken to minimize potential adverse impacts of discharge on the aquatic ecosystem.

Date: _____

_____

STEVEN J. ROEMHILDT, P.E.
Colonel, Corps of Engineers
District Commander

ENCLOSURE 2

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
AND
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SAND ISLAND 406 OIL MITIGATION
MOBILE, ALABAMA

RE-ESTABLISHMENT OF SAND ISLAND

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

CESAM-PD-EC
PUBLIC NOTICE NO. FP10-MH15-10 **December 20, 2010**

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
AND
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SAND ISLAND 406 OIL MITIGATION
MOBILE, ALABAMA
FEDERALLY AUTHORIZED

RE-ESTABLISHMENT OF SAND ISLAND

Interested persons are hereby notified that the U.S. Army Corps of Engineers (Corps), Mobile District, proposes to place at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico. Under the authority included below, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for re-establishing Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action will be from the Sand Island Beneficial Use Area (SIBUA) and the Mobile Bar Channel. The funding made available for this effort will be additional funding over and above the District's normal maintenance dredging costs for the Mobile Bar Channel.

This public notice is issued in accordance with rules and regulations published in the Federal Register on 26 April 1988. These regulations provide for the review of the dredging programs for federally authorized projects. These laws are applicable whenever dredged or fill material may enter navigable waters. The recipient of this notice is requested specifically to review the proposed action as it may impact on water quality, relative to the requirements of Section 404(b)(1) of the Clean Water Act. We also request comments on any other potential impacts.

WATERWAY AND LOCATION: Mobile Bar Channel, Sand Island, and the Gulf of Mexico, Mobile County, Alabama.

PROJECT AUTHORIZATION: Sec 406 of P.L. 111-212 Supplemental Funds.

SEC. 406. (a) The Secretary of the Army may use funds made available under the heading ''OPERATION AND MAINTENANCE'' of this chapter to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

(b) The Secretary of the Army shall coordinate the placement of dredged material with appropriate Federal and Gulf Coast State agencies.

(c) The placement of dredged material pursuant to this section shall not be subject to a least-cost-disposal analysis or to the development of a Chief of Engineers report.

(d) Nothing in this section shall affect the ability or authority of the Federal Government to recover costs from an entity determined to be a responsible party in connection with the Deepwater Horizon Oil spill pursuant to the Oil Pollution Act of 1990 or any other applicable Federal statute for actions undertaken pursuant to this section.

DESCRIPTION OF PROPOSED ACTION: The Corps conducts maintenance dredging and disposal activities in the Mobile Bar Channel on a one to two year cycle. The primary disposal area for the material removed from the bar channel includes an area known as the SIBUA as illustrated in **Figure 1.** The beneficial use area is located west of the Federal navigation channel and is intended to keep valuable sand removed from the bar channel in the local littoral system. In September 2004 a modification of the SIBUA was issued to expand the disposal site to include the area around the Sand Island Lighthouse (**Figure 2)**, which is a valuable cultural resource listed on the National Register of Historic Places. Placement of sandy material around the light house's rubble foundation is beneficial in that it provides protection to the historic structure. In order to continue beneficial use practices, in December 2008 the Corps expanded the SIBUA extending a 4,500-foot wide southern boundary approximately 2,000 to the south, also illustrated in **Figure 2**. This expanded area provides for continued placement of sandy material from the Mobile Bar Channel in a manner that returns this material to the local littoral system.

Under the proposed Sand Island 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Funding made available for this effort will be additional funding over and above the District's normal maintenance dredging costs for the Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. The proposed Sand Island plan view is presented in **Figure 3** with

the resulting cross sections illustrated in **Figure 4**. The intent of this action is to prevent, as much as possible, submerged oil in the Gulf of Mexico from entering into the entrance of Mobile Bay. Doing so will provide protection to the fragile ecosystems and valuable natural resources that are an important and integral part of the Mobile Bay system.

In addition to oil mitigation, this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. Also, this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the lighthouse will provide valuable protection to the historic structure.

WATER QUALITY CERTIFICATION: Pursuant to the requirements of the Clean Water Act, a state water quality certification will be requested from Alabama Department of Environmental Management (ADEM) to cover the activities associated with the proposed removal of material from the SIBUA for placement and construction of the island. A decision relative to water quality certification will be made by ADEM upon completion of the required comment period for this public notice and other coordination with the appropriate agencies.

COASTAL ZONE CONSISTENCY: Pursuant to the Coastal Zone Management Act, the proposed action is consistent with the Alabama Coastal Management Program to the maximum extent practicable. Upon completion of the required comment period and completed coordination with the appropriate agencies, a decision relative to coastal zone consistency will be made by ADEM.

USE BY OTHERS: The proposed action is not expected to create significant impacts on land and water use plans in the vicinity of the project. Use of the waters in the vicinity of the project area includes commercial shipping, fishing and recreational boating.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) CONSIDERATIONS:
In accordance with the requirements of the NEPA impacts associated with the Sand Island Oil Mitigation activities a draft Environmental Assessment (EA) has been prepared and is available for review in the Corps, Mobile District Office or online at http://www.sam.usace.army.mil/pd/Pd1.htm. Based on the conclusion presented in the draft EA, it is determined that the implementation of the proposed action would not result in long-term adverse impacts and that no significant cumulative impacts would occur. Upon finalization of the draft EA, a Findings of No Significant Impacts (FONSI) will be prepared.

SECTION 404 (B)(1) EVALUATION REPORT: In accordance with Public Law 92-500, Section 404(b)(1) Guidelines promulgated by the U.S. Environmental Protection Agency under the Clean Water Act, an evaluation of water quality impacts associated with the proposed action was prepared in accordance with guidelines promulgated by the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act. Impacts associated with this action include a temporary increase in turbidity and suspended solids concentrations in and adjacent to the dredging and placement areas, short-term elimination of benthic organisms and localized short-term degradation of esthetics near the disposal area. A draft 404(b)(1) Evaluation Report

has been prepared and is available for review in the Corps, Mobile District Office or online at http://www.sam.usace.army.mil/pd/Pd1.htm. Recent sediment quality investigations performed in the channel show the material to be substantially free of contaminants of concern and suitable for placement in the Sand Island site.

ENDANGERED/THREATENED SPECIES: Coordination for the proposed action is being conducted with the U.S. Department of the Interior, Fish and Wildlife Service (FWS), and the U.S. Department of Commerce, National Marine Fisheries Service (NMFS). Some species listed by the FWS and NMFS as endangered or threatened are occasional visitors to the vicinity of the project area. Impacts to sea turtles and Gulf sturgeon associated with hopper dredging activities have been evaluated by NMFS in the November 19, 2003 Regional Biological Opinion (RBO) entitled "Dredging of the Gulf of Mexico Navigation Channels and Sand Mining Areas Using Hopper Dredges (Consultation Number F/SER/2000/01287). Based on the determination made by the Corps, Mobile District, no endangered or threatened species or their critical habitats will be adversely impacted by the proposed action.

ESSENTIAL FISH HABITAT: Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity". The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The NMFS has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, mud, sand, shell, and rock substrates, and the estuarine water column. The habitat in the project area, which is located just outside the mouth of Mobile Bay, consists of Gulf of Mexico waters and sandy substrate consistent with sediment along the northern Gulf of Mexico. The NMFS has management plans for brown shrimp (*Penaeus aztecus*), white shrimp (*P. setiferus*), red drum (*Sciaenops oellatus*), and Spanish mackerel (*Scomberomorus maculatus*) within the project area. Based on the time that it would take to complete the dredging and disposal, and the size of the proposed placement areas in relation to the total available acreage of similar habitat within the Gulf of Mexico, the Corps has determined that the proposed action would result in long-term adverse effects to EFH.

CULTURAL RESOURCES CONSIDERATION: Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended and implementing regulations 36 CFR Part 800 requires consultation with other agencies to avoid or minimize adverse effect on historical, architectural, archaeological, and cultural resource. In order to ensure compliance, cultural resources are being evaluated via a literature review and existing data which focused on archaeological resources (shipwrecks). The information gathered from these sources will be used to characterize and assess the potential effects of the proposed project. A preliminary evaluation revealed that there were several possible ship wrecks in the vicinity of the SIBUA. A secondary benefit from placement of sandy material around the light house's rubble foundation will be providing protection to the historic structure which is a valuable cultural resource listed on the National Register of Historic Places. This action will be coordinated with the Alabama State Historic Preservation Officer.

EVALUATION: The decision whether to proceed with the proposed action would be based on an evaluation of the overall public interest. That decision would reflect the national concerns for both protection and utilization of important resources**.** The benefits that may be expected to accrue from this proposal must be balanced against its reasonably foreseeable detriments. The decision whether to proceed and the conditions under which the activity would occur would be determined by the outcome of this general balancing process. All factors that may be relevant to the proposed action would be considered. Among these are conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the public. The proposed action would proceed unless it is found to be contrary to the overall public interest. Inasmuch as the proposed work would involve the discharge of materials into navigable waters, specification of the proposed disposal sites associated with this Federal project is being made through the application of guidelines promulgated by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army. If these guidelines alone prohibit the specification of any proposed disposal site, any potential impairment of the maintenance of navigation, including any economic impacts on navigation and anchorage that would result from the failure to use this site would also be considered.

COORDINATION: Among the agencies receiving copies of this public notice are:

Region 4, U.S. Environmental Protection Agency
U.S. Department of the Interior, Fish and Wildlife Service, Daphne, Alabama
Bon Secour National Wildlife Refuge, Fish and Wildlife Service
Regional Director, National Park Service
U.S. Department of Commerce, National Marine Fisheries Service, Panama City, Florida
U.S. Department of Commerce, National Marine Fisheries Service, Protected Species Branch, St. Petersburg, Florida
Commander, Eighth Coast Guard District
Alabama State Historic Preservation Officer
Alabama Department of Environmental Management
Alabama Department of Conservation and Natural Resources
Gulf of Mexico Fishery Management Council
U.S. Department of Agriculture, Natural Resources Conservation Service

Other Federal, State, and local organizations, affiliated Indian Tribe interests, and U.S. Senators and Representatives of the State of Alabama are being sent copies of the notice and are being asked to participate in coordinating this proposed work.

CORRESPONDENCE: Any person who has an interest that may be affected by the proposed activity may request a public hearing. Any comments or requests for a public hearing must be submitted in writing to the District Engineer within 30 days of the date of this public notice. A request for a hearing must clearly set forth the interest that may be affected and the manner in which the interest may be affected. You are requested to communicate the information

contained in this notice to any other parties who may have an interest in the proposed activities. Correspondence concerning the public notice should refer to Public Notice No. FP10-MH15-10 and should be directed to the Commander, U.S. Army Engineer District Mobile, P.O. Box 2288, Mobile, Alabama 36628-0001, ATTN: CESAM-PD-EC. For additional information please contact Larry Parson at (251) 690-3139.

CURTIS M. FLAKES
U.S. Army Corps of Engineers
Mobile District

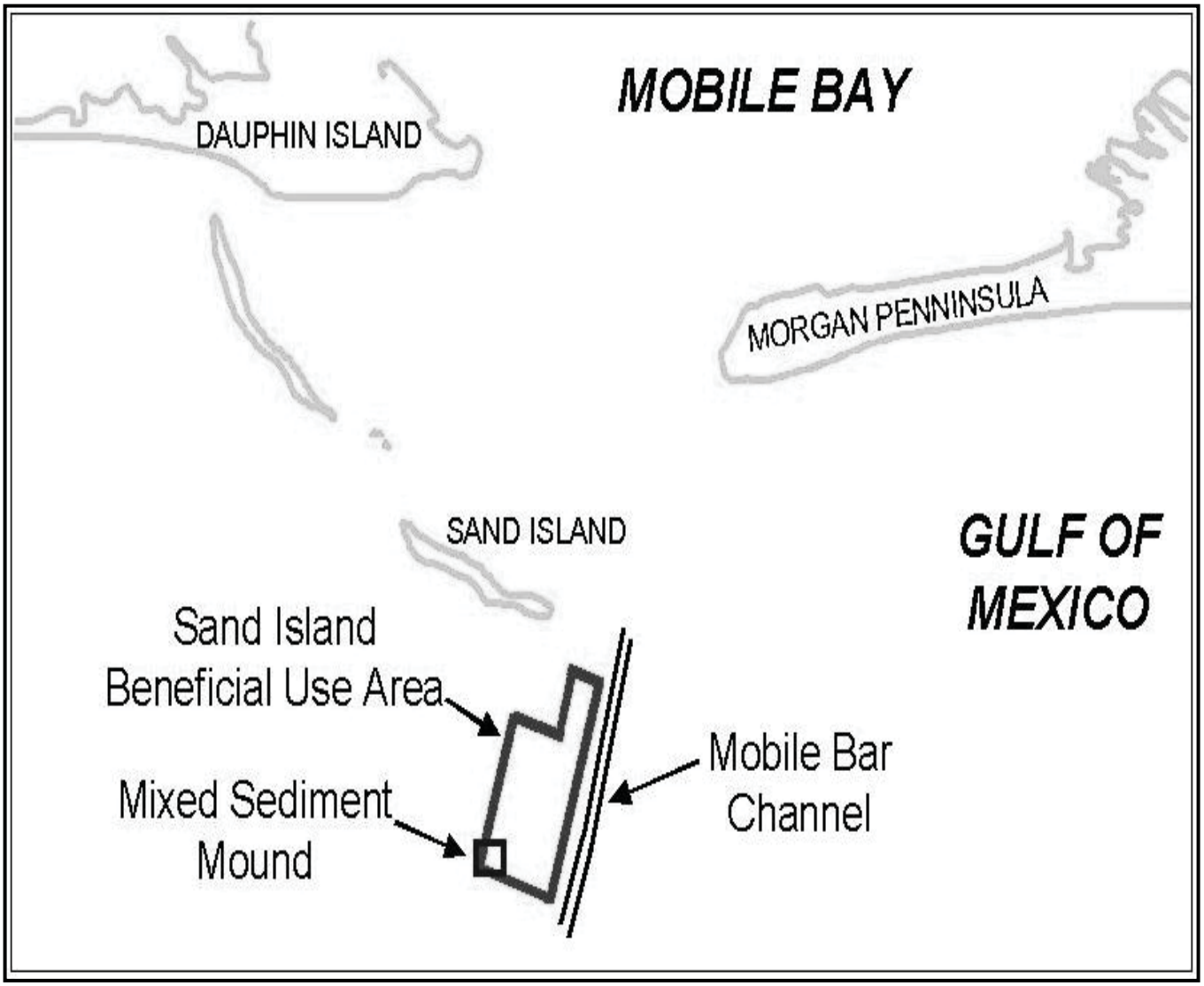

Figure 1. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

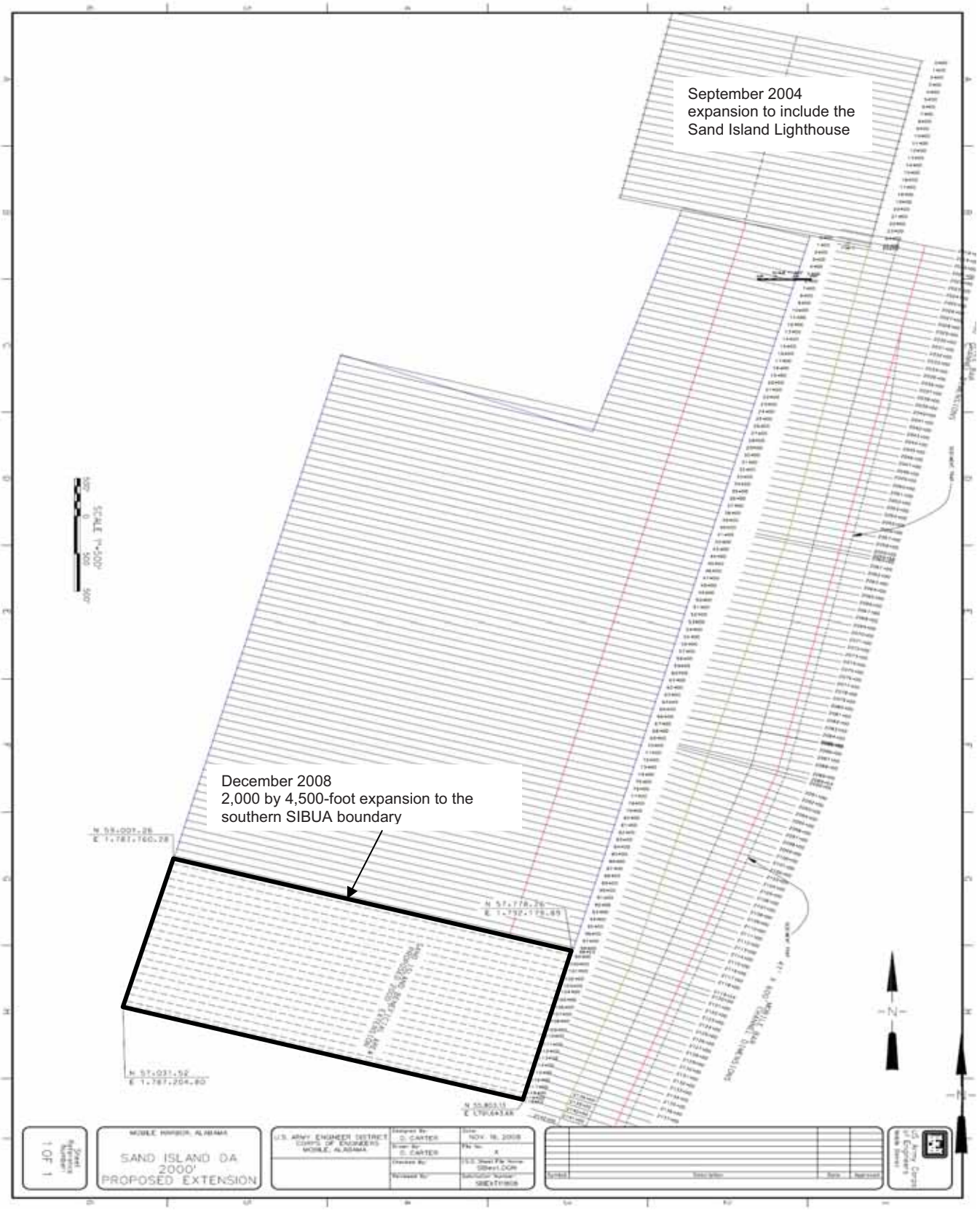

Figure 2. September 2004 and December 2008 SIBUA expansion areas.

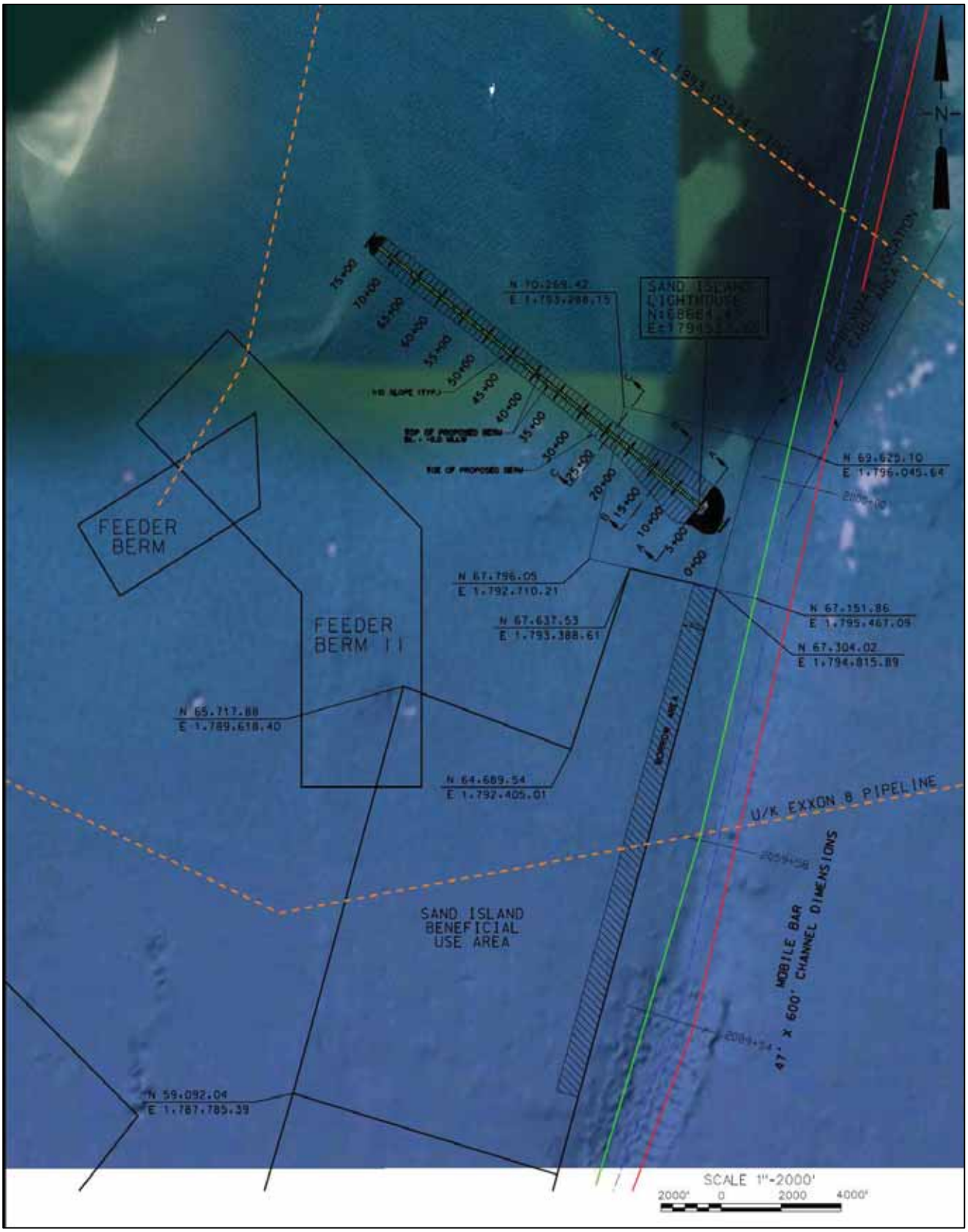

Figure 3. Proposed Sand Island plan view

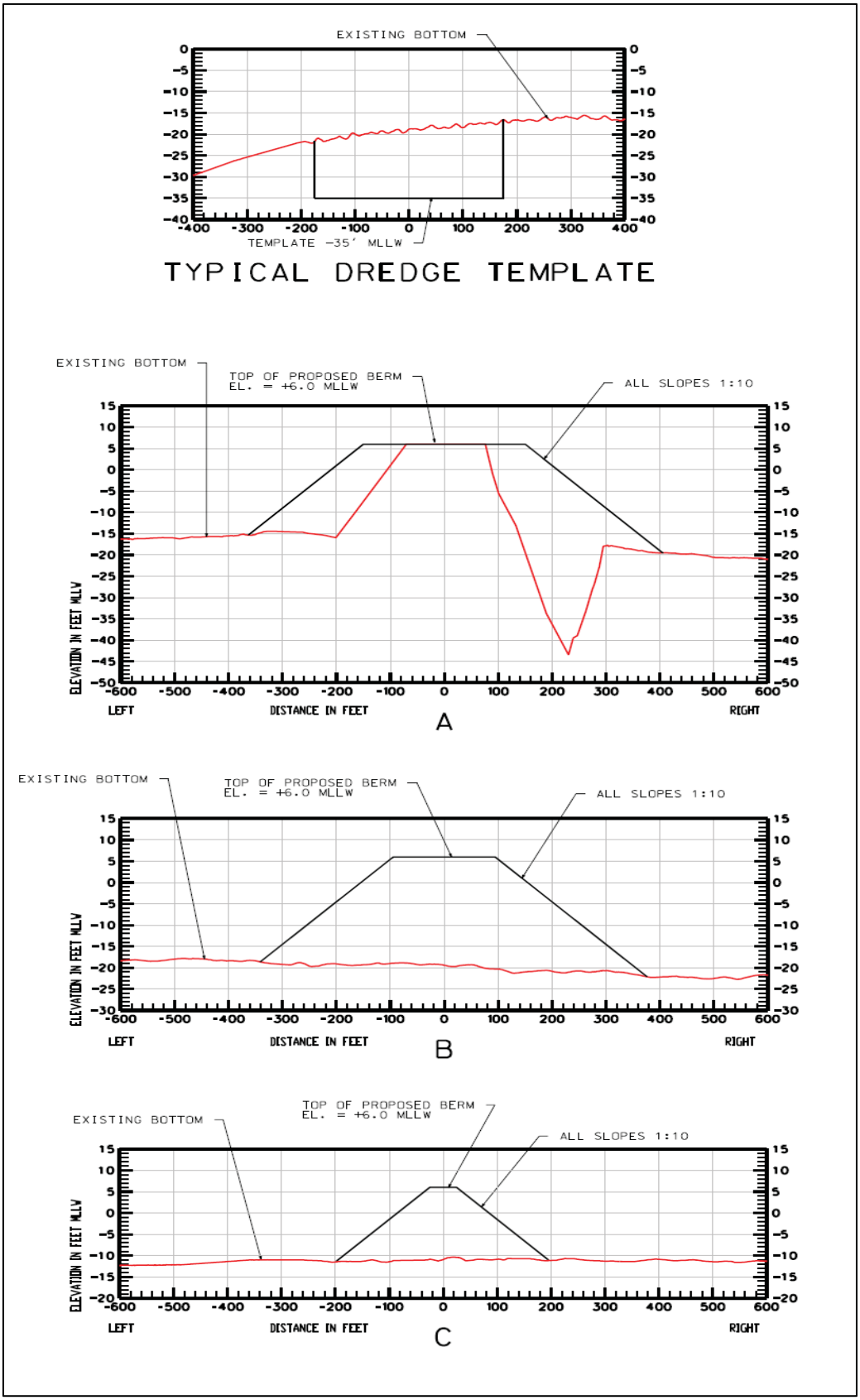

Figure 4. Proposed Sand Island cross sections

Neil C. Johnston
Real Estate, Land Use & Timber Section
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njohnston@handarendall.com

HAND ARENDALL LLC ▪ LAWYERS

RSA TOWER ▪ 11 NORTH WATER STREET, SUITE 30200 ▪ MOBILE, ALABAMA 36602 ▪ (251) 432-5511
Post Office Box 123 ▪ Mobile, Alabama 36601 ▪ Facsimile: (251) 694-6375

January 20, 2011

Colonel Steven J. Roemhildt, P.E.
Commander, Department of Army
Mobile District Corps of Engineers
Attn: CESAM-DE
P. O. Box 2288
Mobile, Alabama 36628-0001

Re: Public Notice No. FP10-MH15-10
1) Re-establishment of Sand Island
2) Alternative and Additional Sources of Dredged Material

Dear Colonel Roemhildt:

We have received and reviewed the Public Notice No. FP10-MH15-10 describing the proposal to re-establish Sand Island as a barrier island adjacent to and extending northwest of the Sand Island Lighthouse. We have also reviewed the historic and recent studies referenced including the draft Environmental Assessment, the draft 404(b)(1) Evaluation Report, and other documents pertaining to the project and reuse or beneficial use of dredged material. In addition to comments presented to the proposed re-establishment, we also provide comments and further requests for use of alternative and supplemental sources of dredged materials.

A. Re-establishment of Sand Island.

1. General. The proposed action provides an excellent opportunity to restore numerous ecological and beneficial features of Mobile Bay and the Gulf of Mexico as well as provide a substantial benefit to the marine environment, to historical and cultural resources, and to the public. We support the proposed actions as presented.

2. Benefits. There are numerous benefits to the Sand Island re-establishment including recreation of a barrier island, restoration of fishery habitats, providing an upland island for local and migratory birds, nesting for sea turtles, providing shallow and deepwater habitat, providing historical and cultural protection and restoration for the Lighthouse, providing an excellent example of reuse and beneficial use of dredged material, providing storm surge protection, and in addition to these public benefits, providing numerous recreational and commercial benefits.

B. Use of Alternative and Additional Sources of Dredged Materials. Upland disposal sites on the Black Warrior – Tombigbee Rivers Waterway and the Alabama-Coosa Rivers Waterway provide an excellent source of alternative and additional sources of dredged material suitable for use for habitat restoration and creation, shoreline protection and re-establishment of barrier islands. For many years, I have had the pleasure of working with numerous private landowners on each river system and working with the Corps of Engineers to find alternatives to establishing and maintaining upland disposal sites which are destructive of riverbank, overflow, hardwood bottomland, habitat and wetland areas. There are numerous upland disposal sites along the rivers including those near the Jackson Bar, Sunflower Bar and several mounds of dredged material located at the Buena Visa Bar at River Mile 109 north of Mobile. I have attached copies of certain photographs illustrating the extent and volume of some of the sites.

We have objected in the past to the continued acquisition and use of upland sites, and suggested that projects such as the re-establishment of Sand Island create a substantial opportunity to restore the upland habitats by utilizing the materials stored there, transporting the material downstream and depositing the material at Sand Island on a continuous basis. The reuse process would reduce or alleviate the need for any upland sites and the existing sand and gravel and additional material from ongoing maintenance dredging can be used. Eventually the existing upland sites could be returned to their natural conditions and functions while the barrier island is restored and maintained, and the Lighthouse is protected. The westward littoral drift of the sand and natural erosion of the Island will also naturally feed Pelican Island and other barrier islands to the west. The benefits of using these alternative and additional sources of dredged material (habitat restoration, protection of historic properties, creation of habitat for fisheries, sea turtles, shore birds and neotropicals, flood and storm surge protection, as well as restoring river hardwood bottomland properties) should be much greater than any of the cost to implement and maintain such a program.

Use of these alternative and additional sources of dredged material would also protect and help restore adjacent lands, sloughs, drainage ways and ponds where the disposal sites and material have eroded and degraded these areas with silt and sedimentation. The use of upland sites has taken hundreds of acres of valuable timberlands out of production as well as shut down farming and destroyed wildlife habitat.

As you are aware, the Corps of Engineers has had a beneficial use program in effect for quite some time. In the Mobile District, the Corps has been studying dredged material suitability for commercial uses and beach re-nourishment, and in 2002 a position of beneficial use coordinator was established by Colonel Robert Keyser in response to numerous discussions we had concerning the destructive nature of the upland spoil sites and past practices of dredge disposal. Since the 2002 Energy and Water Development Appropriations Bill authorized the investigation of recycling dredged material as an alternative to disposal of dredged material in

upland sites, we request that a program be implemented to obtain the dredged material from the upland sites for use during the re-establishment of Sand Island.

There are millions of cubic yards of material available in the upland disposal sites. Use of this alternative source and recycling program is supported by private landowners where the upland disposal areas are located, by the Corps of Engineers, the Alabama Department of Conservation and Natural Resources, by conservation groups and by Congress.

There are ongoing programs in Florida, Mississippi and Louisiana for recycling projects like this. As an example, I enclose for you a copy of the 2002 explanation of the Coastal Wetlands Planning, Protection & Restoration Act description of activities in Louisiana. This is the same report that we provided to your predecessors in 2002 during our discussions about the recertification of proposed maintenance dredging and disposal for the Black Warrior-Tombigbee Waterway operations.

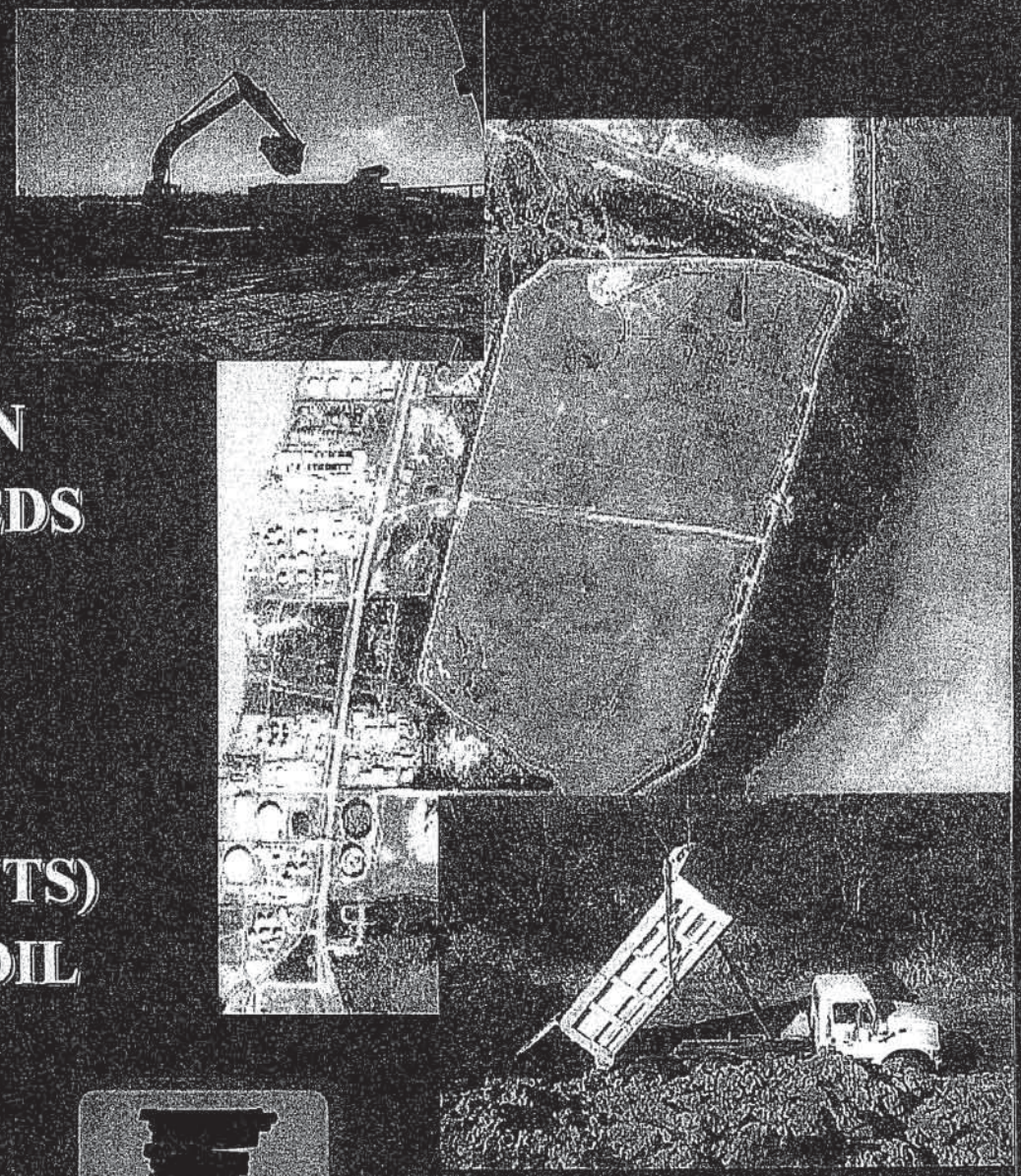
Please keep me up to date on the progress of the project and whether we can work out an alternative source program.

Yours very truly,

Neil C. Johnston
For the Firm

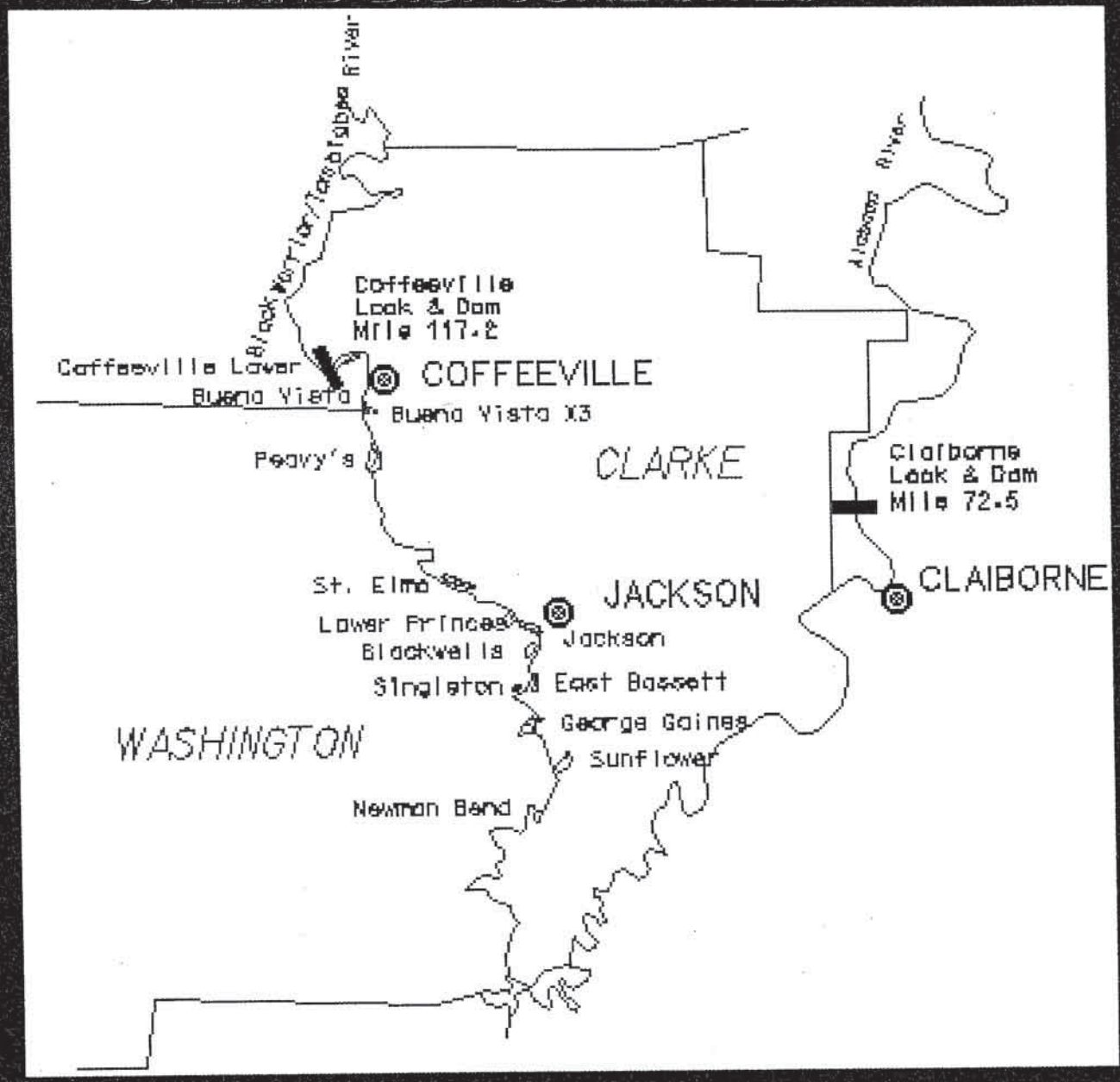
NCJ:lhm
Enclosures
cc: Dr. Susan I. Rees
Mr. Curtis M. Flakes
Mr. and Mrs. Robert Ware
Mr. Robert Keyser
1180263_1

POSSIBLE BENEFICIAL USES

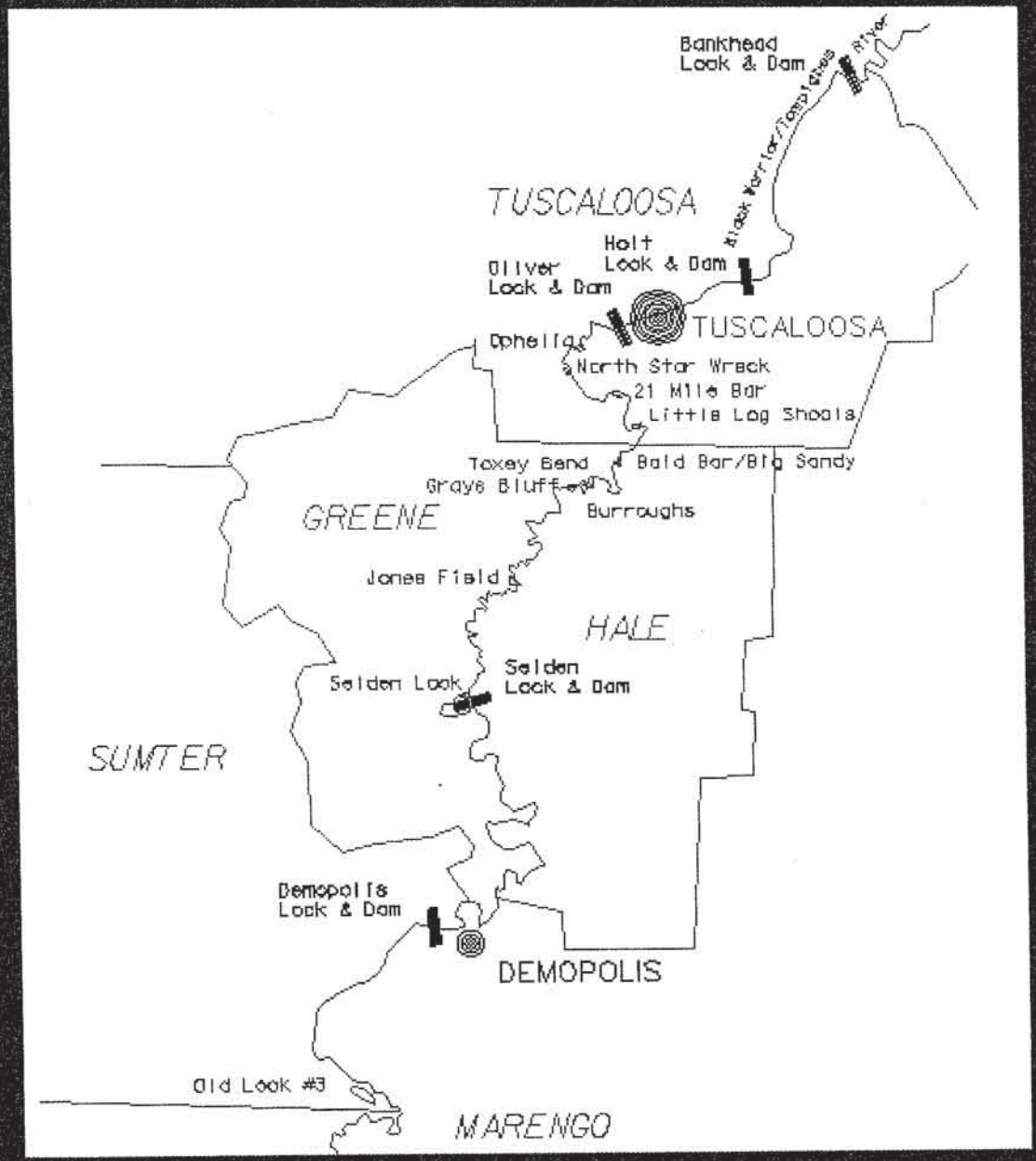


- LAND RESTORATION
- CREATE OYSTER BEDS
- FILL ABANDONED MINES, PITS
- AGRICULTURAL (BLEND WITH SAWDUST, NUTRIENTS)
- MANUFACTURED SOIL
- MARSH CREATION
- SOD FARM

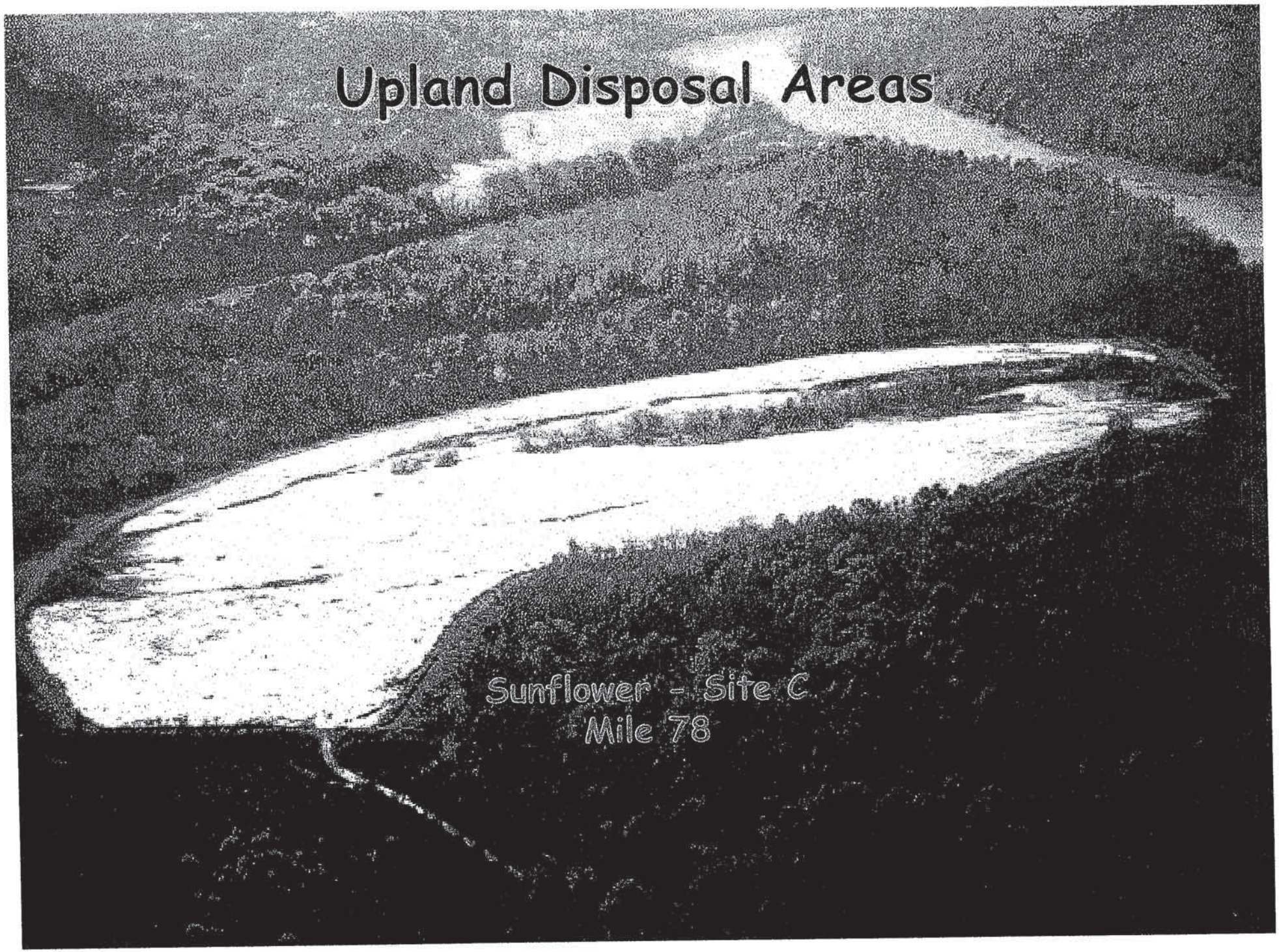
LOWER BW&T
UPLAND DISPOSAL SITES

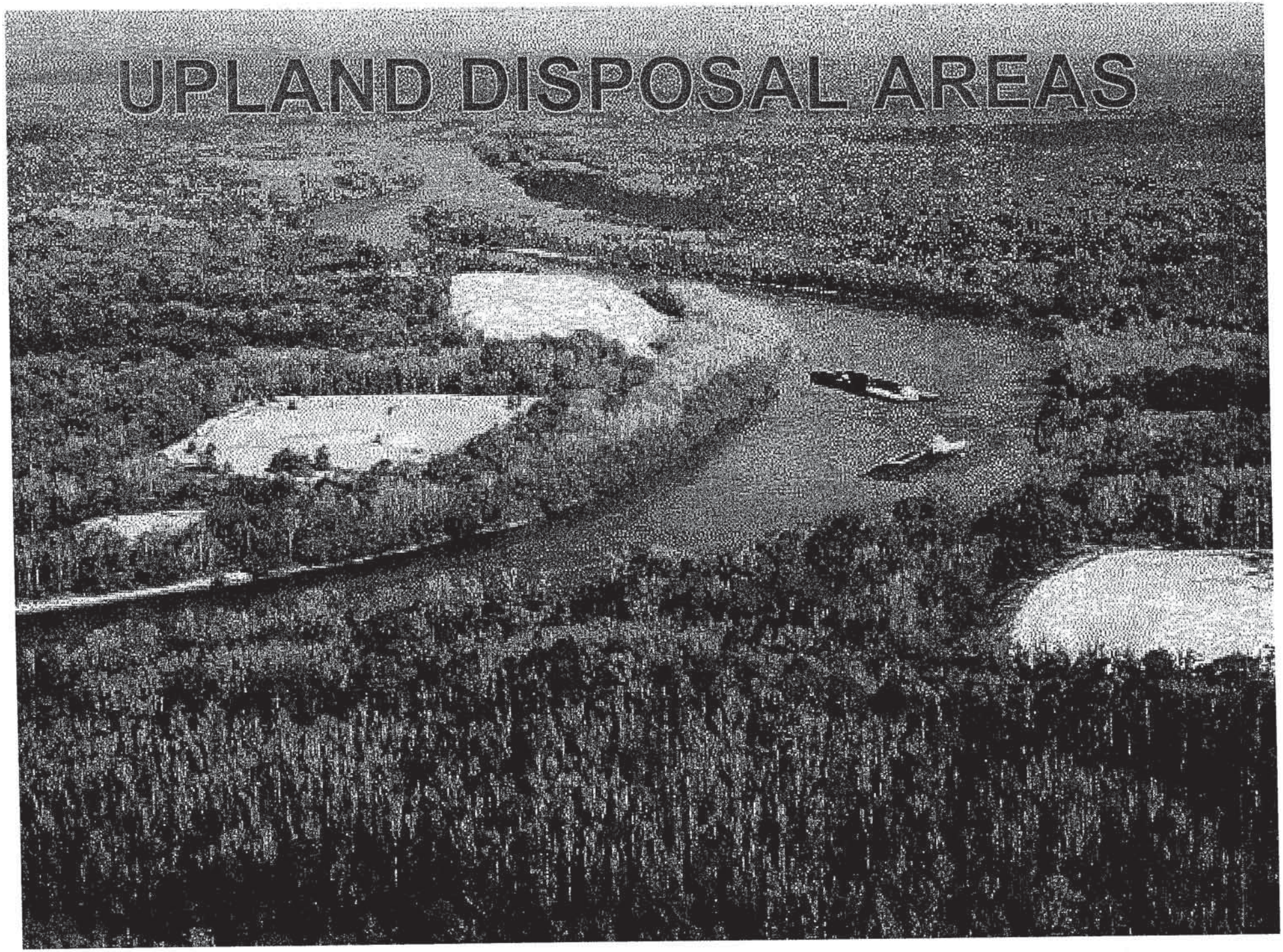


UPPER BW&T
UPLAND DISPOSAL SITES



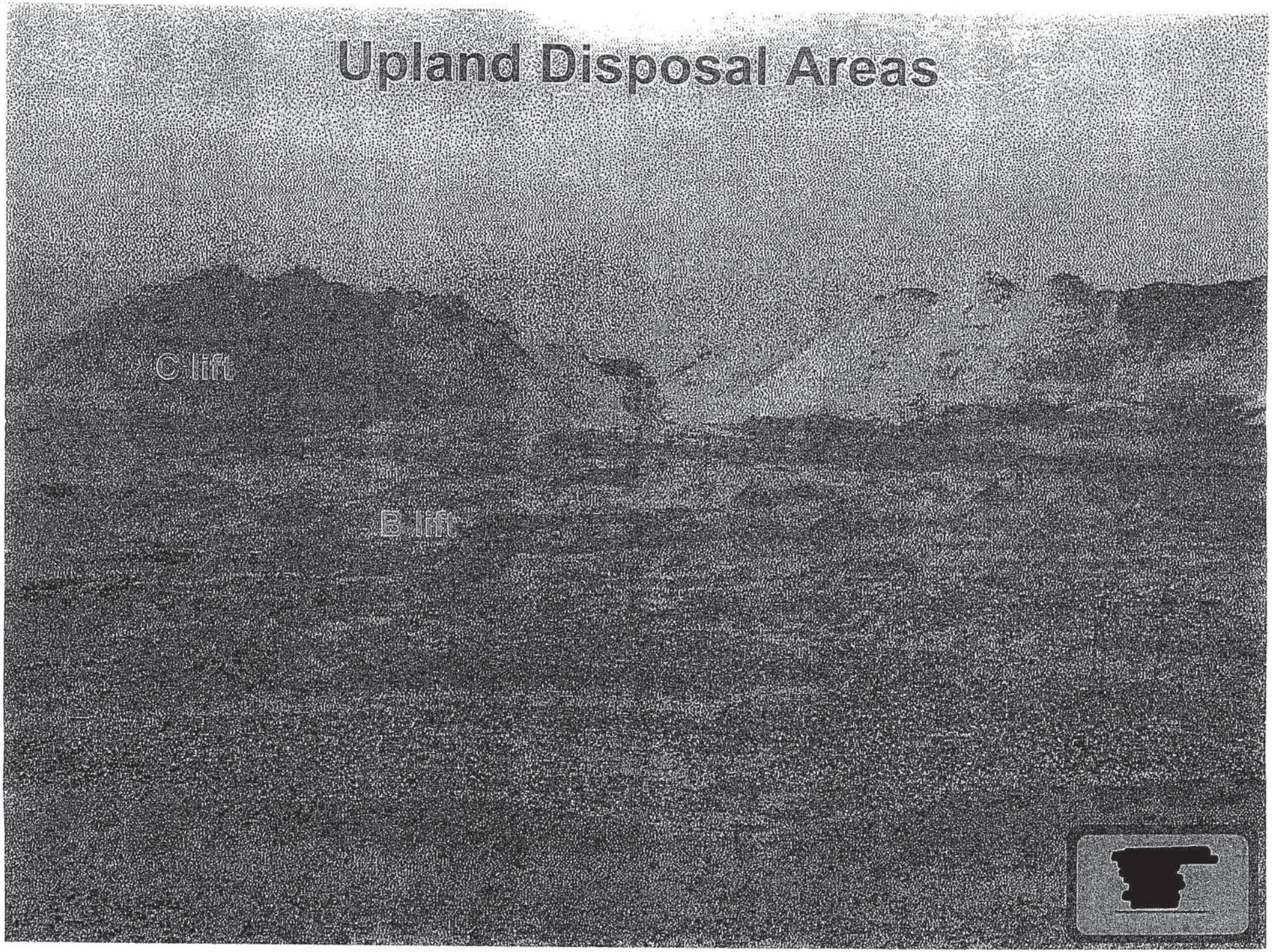
Upland Disposal Areas

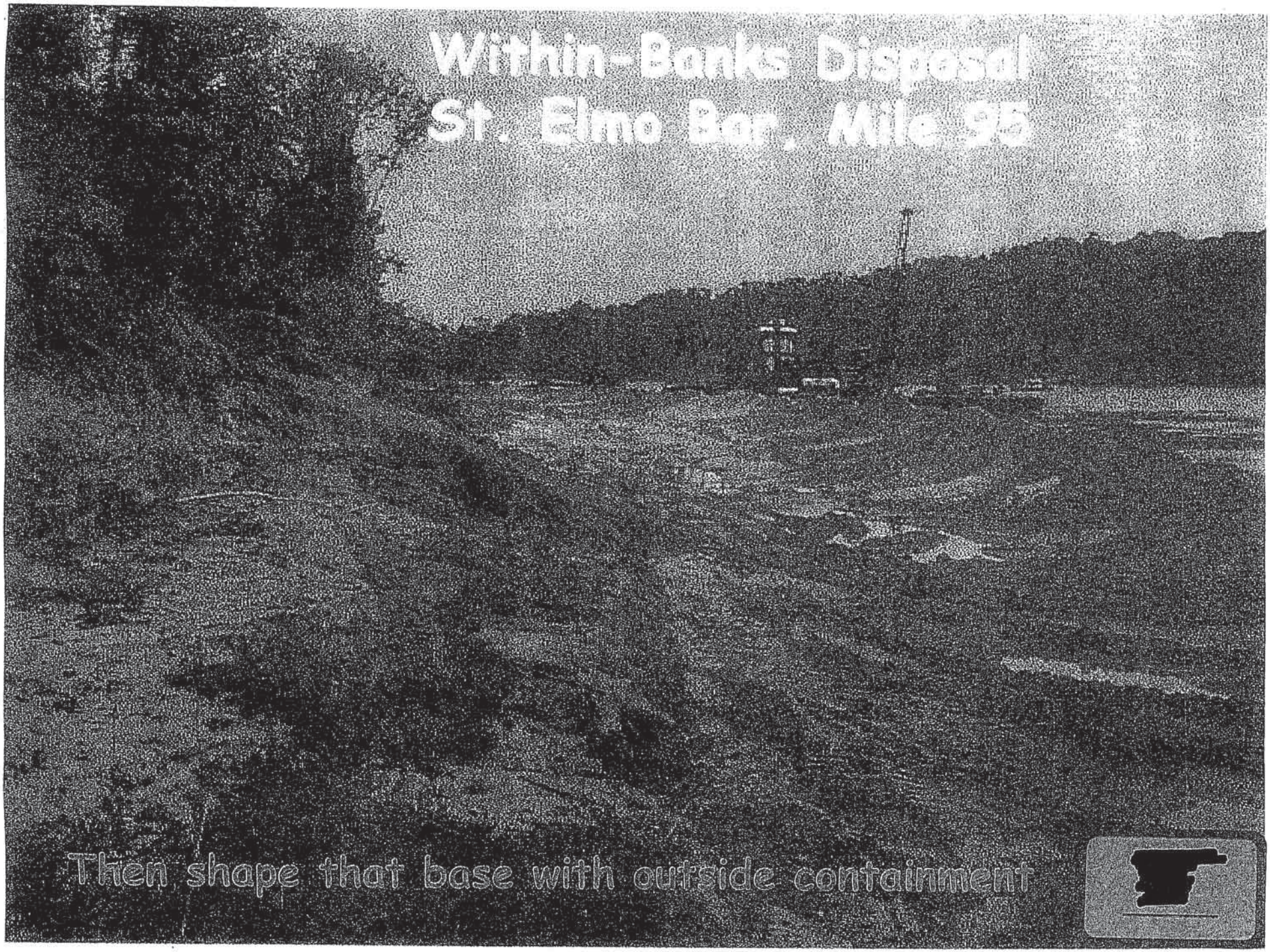


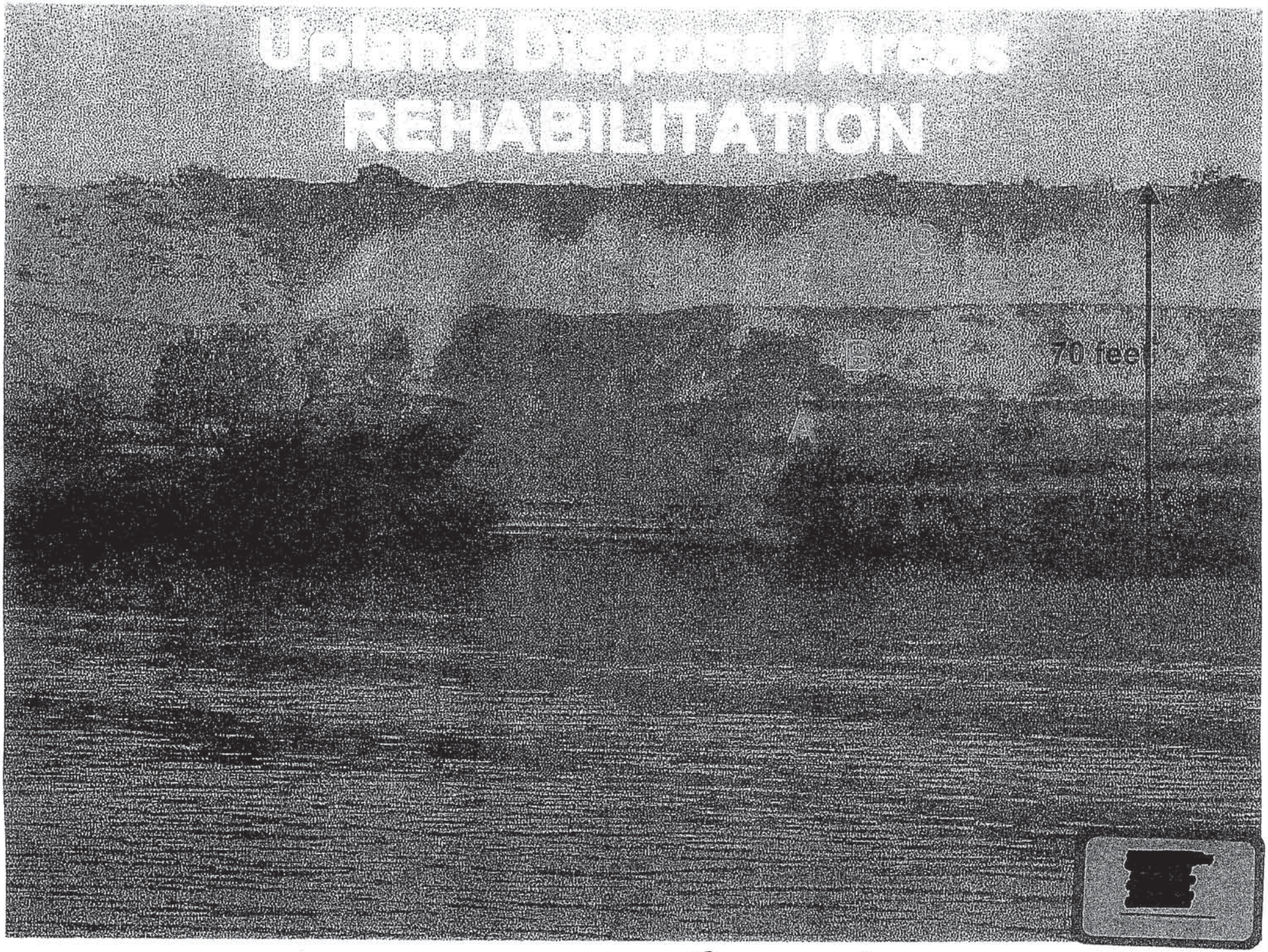

UPLAND DISPOSAL AREAS

Buena Vista

Upland Disposal Areas

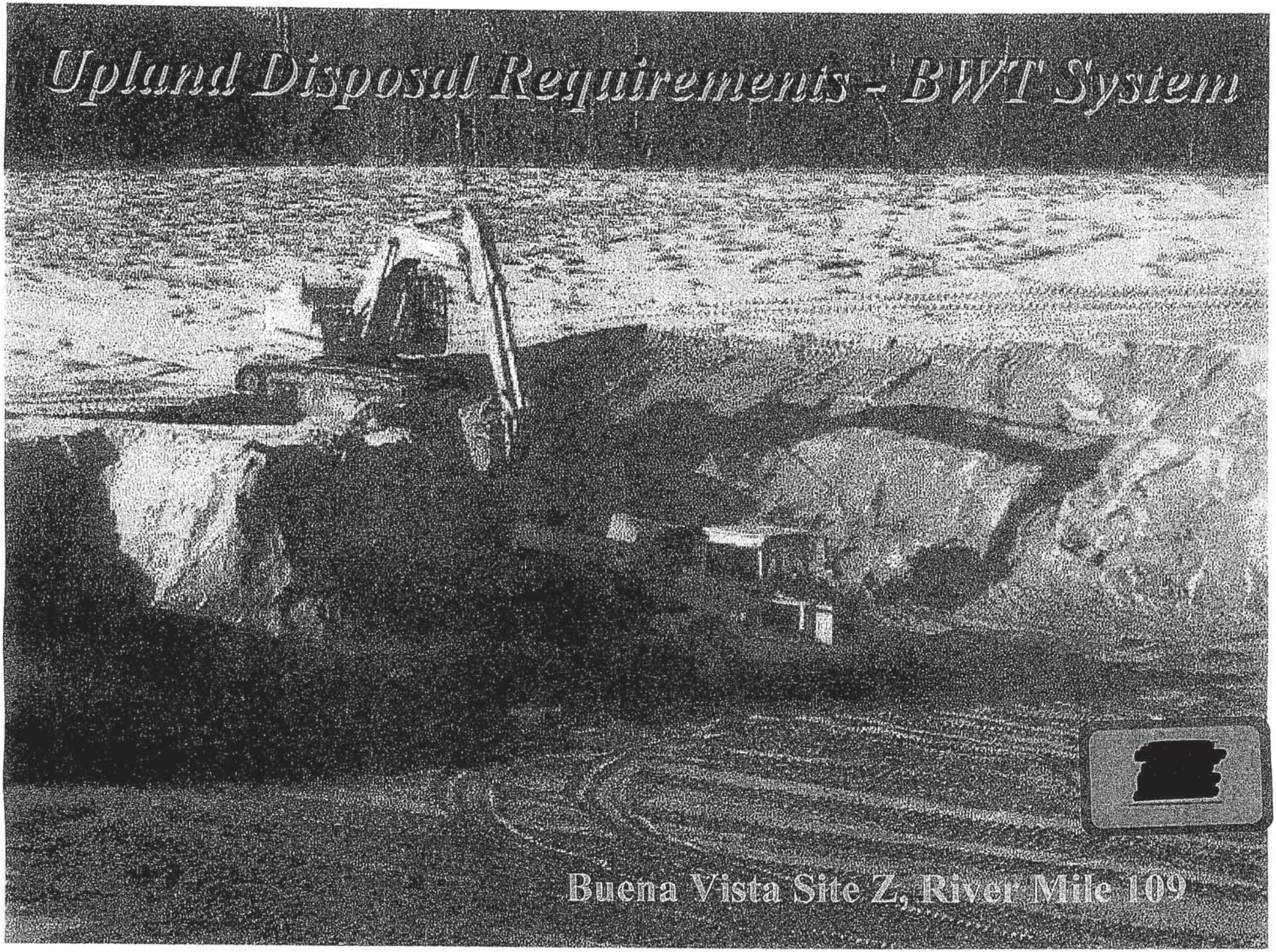


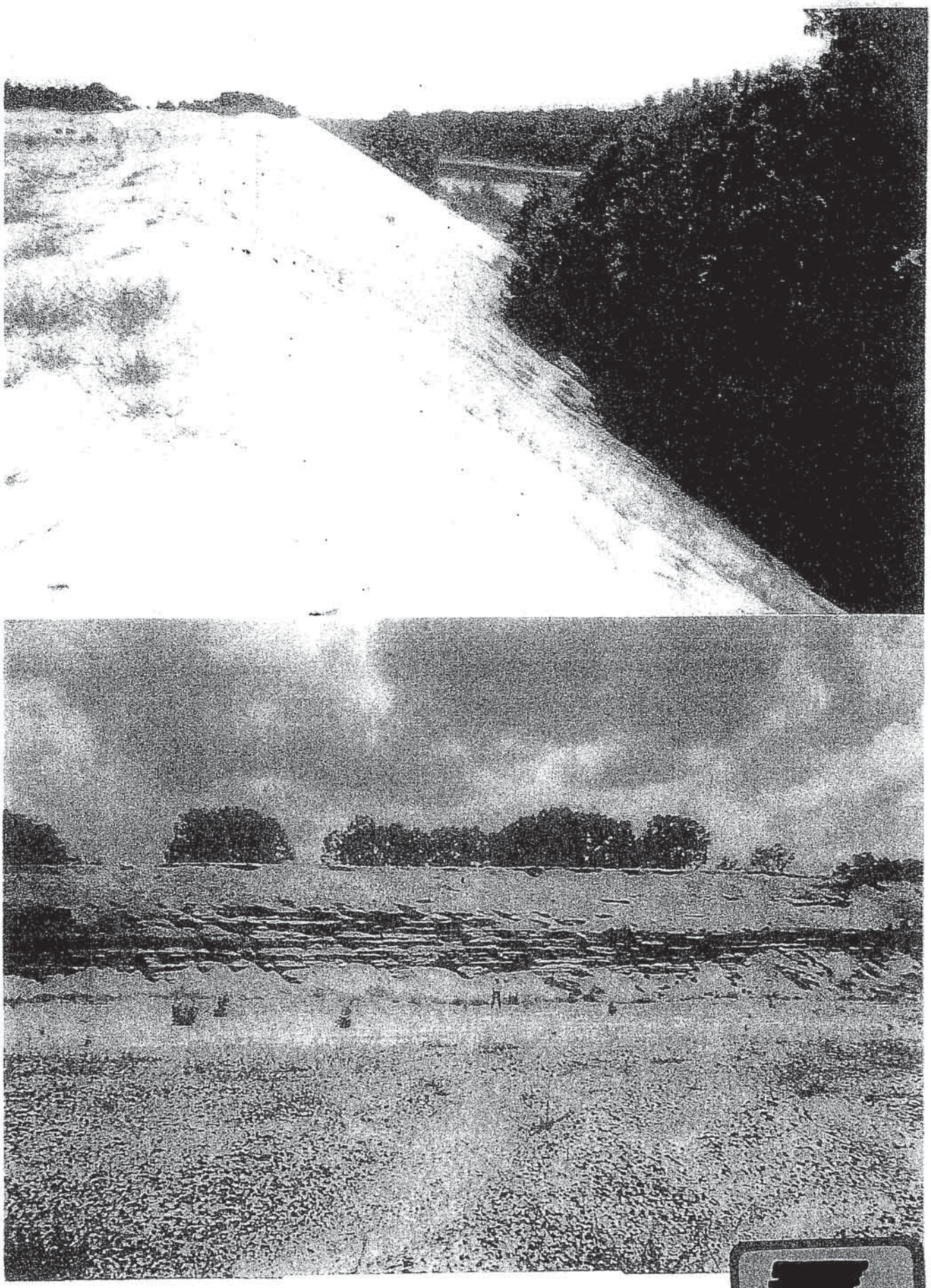

Within-Banks Disposal
St. Elmo Bar, Mile 95
Then shape that base with outside containment



Buena vista

Upland Disposal Requirements - BWT System





Buena Vista 'Z' Disposal Area

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

REPLY TO
ATTENTION OF

FEB 15 2011

Coastal Environment Team
Planning and Environmental Division

Mr. Neil C. Johnston
Hand Arendall, LLC
RSA Tower
11 North Water Street, Suite 30200
Mobile, Alabama 36602

Dear Mr. Johnston:

Please reference your letter dated January 20, 2011, concerning Public Notice Number FP10-MH15-10 (Enclosure). I would like to extend my appreciation for your support of the Sand Island oil mitigation project. Although the main objective is to mitigate the impacts of the Deepwater Horizon Oil spill, this effort also provides an opportunity to begin reestablishment of Sand Island, accelerate the return of sediment into the local littoral system, enhance environmental resources, and provide much needed protection to the historic Sand Island Lighthouse. The U.S. Army Corps of Engineers (Corps), Mobile District shares your desire and agrees with your position that sediment contained in the upland disposal sites on the Black Warrior-Tombigbee (BWT) and the Alabama-Coosa Rivers Waterways may provide a potential source of sand for actions such as this. As you pointed out, use of these sediments would reduce the need for additional upland disposal capacity and provide numerous environmental benefits that are also in the interest of the Corps' maintenance dredging program.

We have examined the feasibility of using these upland sediments for coastal applications such as those mentioned in your letter. Our findings concluded that although the sediment matches favorably to the local coastal sands in terms of its quartz content and grain size, it is considered to be incompatible due to its color and was not considered further as a source of sand for this particular project. The upland sediments exhibit a pale yellow-tan color while the local coastal sands are translucent quartz grains with a pale white to light gray color. The coloring appears to be a uniform thin grain-surface staining or coating, likely an iron-manganese oxide that is not a part of the mineral grain structure itself, likely the result of an earlier depositional environment. As such, use of this material for direct beach application such as that for Sand Island is questionable from an environmental standpoint. Therefore, the Sand Island Beneficial Use Area was considered our most viable source of material for this project.

It may be possible that exposing upland river sand to the open marine environment would allow the sediment to rapidly bleach out, thus, becoming more compatible with local coastal sediments. The Corps is conducting a demonstration project to evaluate the performance of material from upland river disposal sites associated with the Federal navigation channel of the

BWT for beach and nearshore placement applications. The demonstration project will consist of placing some of this material around the eastern end of Dauphin Island where it will be exposed to such conditions. The placed sediment will be closely monitored to document changes in sand volume and sand color over time. If the demonstration exhibits positive results, it may open numerous opportunities for use of this material for coastal applications consistent with established regional sediment management principles and goals.

I hope this letter provides you with sufficient information to better understand the Corps' position on the use of upland river sediments. Should you have additional questions or require any further information, please contact Mr. Larry Parson at (251) 690-3139.

Sincerely,

Steven J. Roemhildt, P.E.
Colonel, Corps of Engineers
District Commander

Enclosure

ENCLOSURE 3

U.S. FISH AND WILDLIFE SERVICE (FWS) CONCURRENCE

Parson, Larry E SAM

From: Patric_Harper@fws.gov
Sent: Tuesday, December 21, 2010 3:59 PM
To: Parson, Larry E SAM
Subject: FP10-MH15-10
Attachments: Manatee Construction Conditions - 08.doc

Larry,

The U. S. Fish and Wildlife Service has reviewed the public notice concerning the proposed re-establishment of Sand Island as a barrier to submerged oil in the Gulf from entering the entrance to Mobile Bay (FP10-MH15-10). No significant adverse effects on fish and wildlife resources, under the Service's purview, are expected to result from this project as long as the applicant implements our Standard Manatee Construction Conditions (attached). Keeping the cutterhead or suction head of the dredge buried in the sediment during operation is the critical factor. Coordination with NOAA should be implemented for the Gulf sturgeon. Therefore, we have no objections to the issuance of this permit.
Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

FWS log # 2011-CPA-0050

(See attached file: Manatee Construction Conditions - 08.doc)

Patric Harper
US Fish & Wildlife Service
1208-B Main St.
Daphne, AL 36526
(251) 441-5857 wk
(251) 441-6222 fax
http://www.fws.gov/daphne

ALABAMA
STANDARD MANATEE CONSTRUCTION CONDITIONS

a. The lessee/grantee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatees.

b. The lessee/grantee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to, or exit from, essential habitat.

d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

e. If manatees are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure their protection. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.

f. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).

g. Temporary signs concerning the manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the lessee/grantee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8½" by 11" which reads *Caution: Manatee Habitat*. *Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).*

TEMPORARY MANATEE SIGNS

for standard manatee construction conditions

The *Caution: Manatee Area* signs are available through the companies listed below and may also be available from other local suppliers. Permit/lease holders, should contact sign companies directly to arrange for shipping and billing.

Cape Coral Signs & Designs Inc.

1311 Del Prado Boulevard
Cape Coral, Florida 33990
1-800-813-9992
FAX 813-772-9992

Municipal Supply and Sign Company
P.O. Box 17
Naples, Florida 33939-1765
1-800-329-5366
813-262-4639
FAX 813-262-4645

JADCO Signing Inc.

708 Commerce Way
P.O. Box 911
Jupiter, Florida 33458
1-800-432-3404
407-747-1065
FAX 407-744-2985

The second sign should be at least 8½ inches by 11 inches, and should read:

Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).

An example is enclosed, and this example can be copied and used during construction activities.

CAUTION

MANATEE HABITAT

IDLE SPEED IS REQUIRED IF OPERATING A VESSEL IN THE CONSTRUCTION AREA.

ALL EQUIPMENT MUST BE SHUTDOWN IF A MANATEE COMES WITHIN 50 FEET OF OPERATION.

ANY COLLISION WITH AND/OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE U.S. FISH AND WILDLIFE SERVICE IN DAPHNE AT

251-441-5181

ENCLOSURE 4

NATIONAL MARINE FISHERIES SERVICE (NMFS)
PROTECTED RESOURCES DIVISION
CONCURRENCE LETTER

Parson, Larry E SAM

From: Ryan Hendren [Ryan.Hendren@noaa.gov]
Sent: Tuesday, December 21, 2010 3:04 PM
To: Lang, Matthew J SAM
Cc: Parson, Larry E SAM; Jacobson, Jennifer L SAM
Subject: Re: DRAFT Sand Island PN (UNCLASSIFIED)
Attachments: Ryan_Hendren.vcf

Matt:

I apologize for not getting back to you sooner. I have been concentrating on a few big projects for your district that I am working on trying to get through before the end of the year.

Upon review of your public notice for the Sand Island 406 Oil Mitigation project (FP10-MH15-10), it is NMFS opinion that it will be covered by the GRBO (F/SER/2000/01287) and no further consultation will be needed.
That being said, we would strongly encourage the USACE to execute the dredging/mitigation efforts in the months of May-July in an effort to help Gulf sturgeon that do utilize this area for winter foraging. The idea being that the newly dredged material will have time to recolonize in time for the winter migration. As for the Manatee, it is solely under the purview of USFWS and you will need to consult with them on the effects.

If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action, consultation will need to be reestablished.

Please contact me if you have any additional questions. -rH

On 12/7/2010 2:51 PM, Lang, Matthew J SAM wrote:
> Classification: UNCLASSIFIED
> Caveats: FOUO
>
> Ryan:
>
> Per our telephone discussion this morning I have attached a DRAFT
> public notice and project figure for the proposed Sand Island Oil
> Mitigation work south of the mouth of Mobile Bay and Dauphin Island.
>
> The area of concern is outside of Gulf sturgeon critical habitat and
> the proposed work would most likely be conducted by a hopper dredge
> which should be covered under the GRBO (a pipeline could potentially
> be used which also was addressed in the GRBO, but we would not know
> for sure which procedure would be implemented until much later in the process).
>
> Additionally, Patric Harper of USFWS suggested that manatee may be
> under your purview this far out, is that true?
>
> Please look this DRAFT notice over as I would like to get your
> feedback as to the nature of our coordination so that we may initiate
> the proper level of correspondence needed.
>
> Thank you.....Matt
>
> If you have any questions or comments I would welcome them as it would
> make Matthew J. Lang Biologist-Coastal Environment Team US Army Corps
> of Engineers Mobile District
> (251) 694-3837 office
> (251) 694-3815 fax
> email:matthew.j.lang@usace.army.mil
>

>
> -----Original Message-----
> From: Parson, Larry E SAM
> Sent: Tuesday, December 07, 2010 1:06 PM
> To: Lang, Matthew J SAM
> Subject: Sand Island PN (UNCLASSIFIED)
>
> Classification: UNCLASSIFIED
> Caveats: FOUO
>
>
>
>
> Classification: UNCLASSIFIED
> Caveats: FOUO
>
>
>
> Classification: UNCLASSIFIED
> Caveats: FOUO
>
>

ENCLOSURE 5

NATIONAL MARINE FISHERIES SERVICE (NMFS)
HABITAT CONSERVATION DIVISION
ESSENTIAL FISH HABITAT (EFH) CONCURRENCE

Parson, Larry E SAM

From: Mark Thompson [Mark.Thompson@noaa.gov]
Sent: Monday, January 03, 2011 2:43 PM
To: Jacobson, Jennifer L SAM
Cc: Parson, Larry E SAM; Lang, Matthew J SAM; Patric Harper; Rosemary Hall; Veronica Beech; Susan Dingman
Subject: Public Notice number FP10--MH15-10 dated December 20, 2010, and letter dated December 23, 2020, regarding the re-establishment of Sand Island in the Gulf of Mexico, Mobile County, Alabama.

NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has received the public notice dated December 20, 2010, regarding the re-establishment of Sand Island in the Gulf of Mexico, Mobile County, Alabama, and to your letter dated December 23 , 2010, initiating essential fish habitat (EFH) consultation and providing an EFH Assessment for the proposed construction.This request was initiated pursuant to the consultation provisions of the Magnuson-Stevens Conservation and Management Act (Magnuson-Stevens Act).

You state that your office does not believe that the project will result in significant impacts to EFH.We have reviewed the EFH Assessment and determined the NMFS does not any EFH conservation recomendations to offer.

Thank you for you effort to comply with the EFH provisions of the Magnuson-Stevens Act.

--
Mark Thompson, Team Leader
Habitat Conservation Division
Florida Gulf Coast, Alabama, Mississippi Panama City Office 850-234-5061 Fax 850-234-2492

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, MOBILE DISTRICT
CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

December 23, 2010

Coastal Environment Team
Planning and Environmental Division

Mr. Mark Thompson
National Marine Fisheries Service,
Habitat Conservation Division
Panama City Office
3500 Delwood Beach Road
Panama City, Florida 32404

Dear Mr. Thompson:

The U.S. Army Corps of Engineers (Corps), Mobile District is proposing the dredging and placement of approximately 1 to 2 million cubic yards (cy) of sand at full Federal expense. This effort will mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico. Placement of this material will be conducted in a manner that will act to re-establish Sand Island. The initial source of sand will be from portions of the Sand Island Beneficial Use Area (SIBUA) with options for future placement from regular maintenance dredging of sand from the Mobile Bar Channel. The SIBUA project was authorized by Section 201 of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662, November 17, 1986, and previous acts). The SIBUA is located west of the Mobile Bar Channel, south of Dauphin Island-Mobile Port entrance and adjacent to the Sand Island Lighthouse.

The current proposed work is authorized by H.R.4899 Section 406 of P.L. 111-212 (111th Congress) allowing the Secretary of the Army the use of funds made available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico. By this letter and its information therein, the Mobile District is requesting to initiate Essential Fish Habitat (EFH) consultation.

Description of the Proposed Sand Island Oil Mitigation Project:

The Corps, Mobile District conducts maintenance dredging and disposal activities in the Mobile Bar Channel on a one to two year cycle. The primary disposal area for the material removed from the bar channel includes the SIBUA as illustrated in **Figure 1.** The beneficial use area is located west of the Federal navigation channel and is intended to keep valuable sand

removed from the bar channel in the local littoral system. In September 2004, a modification of the SIBUA was issued to expand the disposal site to include the area around the Sand Island Lighthouse (**Figure 2**), which is a valuable cultural resource listed on the National Register of Historic Places. Placement of sandy material around the lighthouse's rubble foundation is beneficial in that it provides protection to the historic structure. In order to continue beneficial use practices, in December 2008, the Corps expanded the SIBUA extending a 4,500-foot wide southern boundary approximately 2,000 to the south, also illustrated in **Figure 2**. This expanded area provides for continued placement of sandy material from the Mobile Bar Channel in a manner that returns this material to the local littoral system.

Under the proposed Section 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cy of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Funding made available for this effort will be additional funding over and above the District's normal maintenance dredging costs for the Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will begin re-establishment of the original Sand Island. The proposed Sand Island plan view is presented in **Figure 3** with the resulting cross-sections illustrated in **Figure 4**. The intent of this action is to prevent, as much as possible, submerged oil in the Gulf of Mexico from entering into the entrance of Mobile Bay. Doing so will provide protection to the fragile ecosystems and valuable natural resources that are an important and integral part of the Mobile Bay system.

In addition to oil mitigation, this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity at SIBUA consistent with established regional sediment management principles and goals. Also, this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the lighthouse will provide valuable protection to the historic structure.

Analysis of Effects:

Congress defines EFH as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity," the designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The National Marine Fisheries Service (NMFS) has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, mud, sand, shell, and rock substrates, and the estuarine water column. In addition, marine areas, such as the water column, vegetated and

non-vegetated bottoms, artificial and coral reefs, geologic features, continental shelf features, and the Mississippi shelf, have also been identified. **Table 1** lists the species managed by the Gulf of Mexico Fishery Management Council.

Open-water and estuarine marshes provide habitat for various species of invertebrates and vertebrates. Epibenthic crustaceans and infaunal polychaetes dominate the diets of higher trophic levels, such as flounder, catfish, croaker, porgy, and drum. The fish species composition of the estuarine and offshore area along the northern Gulf of Mexico is of a high diversity due to the variety of environmental conditions, which exist within the area. The major fisheries landed along the Mississippi and Alabama Gulf coast are menhaden *(Brevoortia patronus)*, mullet *(Mugli cephalus)*, croaker *(Micropogonias undulates and Leiostomus xanthurus)*, shrimp *(Penaeus axetecus, P. setiferus, and P. duorarum)*, blue crab *(Callinectes sapidus)*, and oyster *(Crassostrea virginica)*.

Most of the motile benthic and pelagic fauna, such as crab, shrimp, and fish, should be able to avoid the disturbed area and should return shortly after the activity is completed. No long-term direct impacts to managed species are anticipated. However, it is reasonable to anticipate some non-motile and motile invertebrate species will be physically affected through disposal operations. These species are expected to recover rapidly soon after the disposal operations are complete.

The Corps, Mobile District, has taken extensive steps to reduce and avoid potential impacts to EFH as well as other significant area resources. Within the project area, EFH has been designated for managed species of Gulf of Mexico dolphin, wahoo, red drum, blue marlin, sharks (11 species), coastal migratory pelagics (3 species), reef fish (43 species), stone crab (2 species) and shrimp (4 species). No habitat areas of particular concern were identified for this area. The Corps, Mobile District will be utilizing a previously authorized disposal area, and adheres to water quality requirements provided by the Alabama Department of Environmental Management (ADEM) to further reduce impacts to EFH. These steps also include reducing the amount of material dredged within the bar channel to the minimal amount required to achieve the project objectives.

Based on the above assessment of the project in relation to impacts to fisheries resources, the overall impact to identified species is considered negligible given the relatively small area. As stated in Public Notice FP10-MH15-10, the Corps, Mobile District, erroneously determined that the proposed project would result in long-term adverse effects to EFH. Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265) we have since determined that the proposed action would not result in long-term effects to EFH and request your concurrence with our assertion that the project will not result in significant impacts to EFH.

If we can be of any further assistance to you, please call Mr. Matthew J. Lang at (251) 694-3837 or e-mail him at matthew.j.lang@usace.army.mil.

Sincerely,

Jennifer L. Jacobson
Chief, Coastal Environment Team

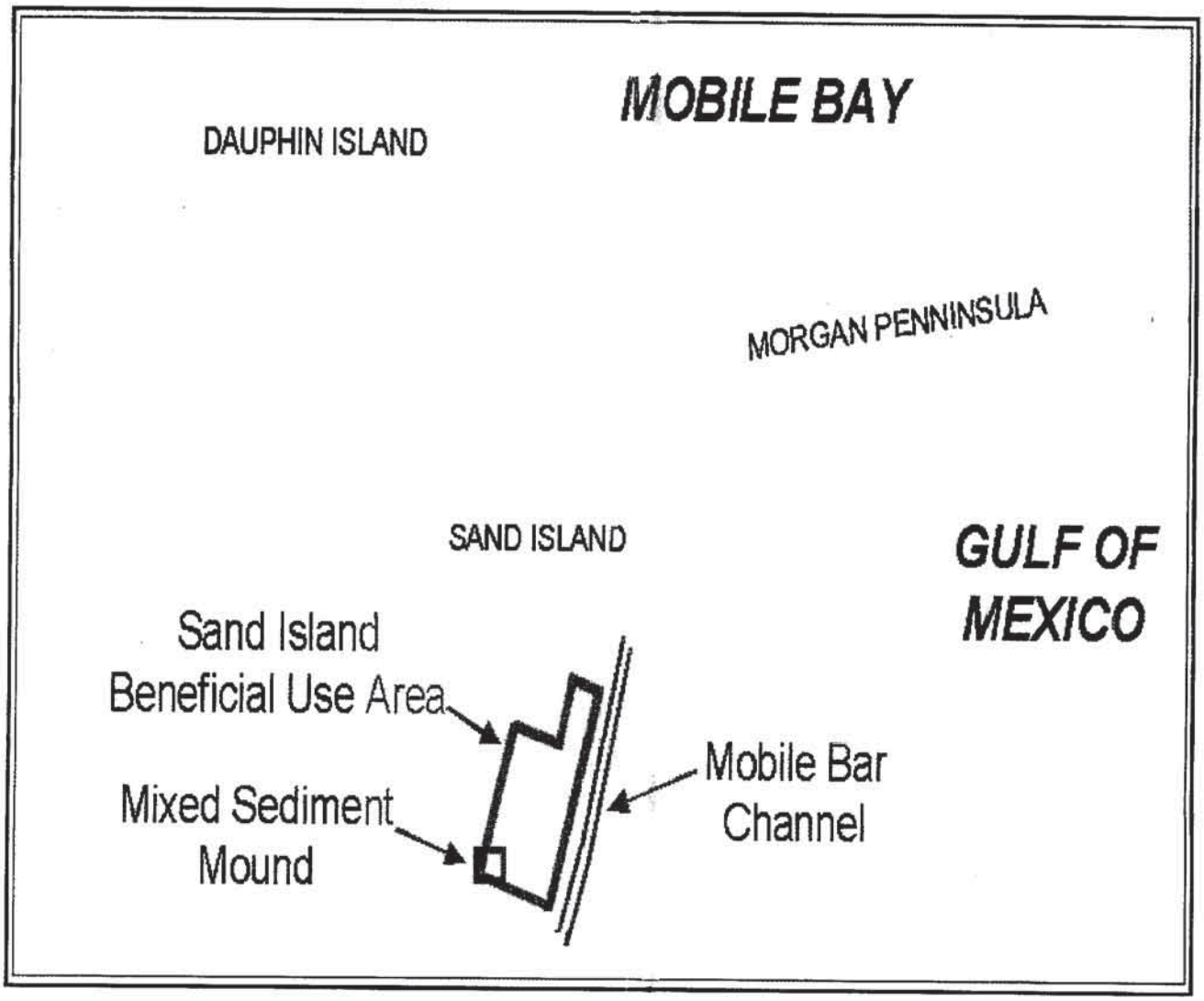


Figure 1. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

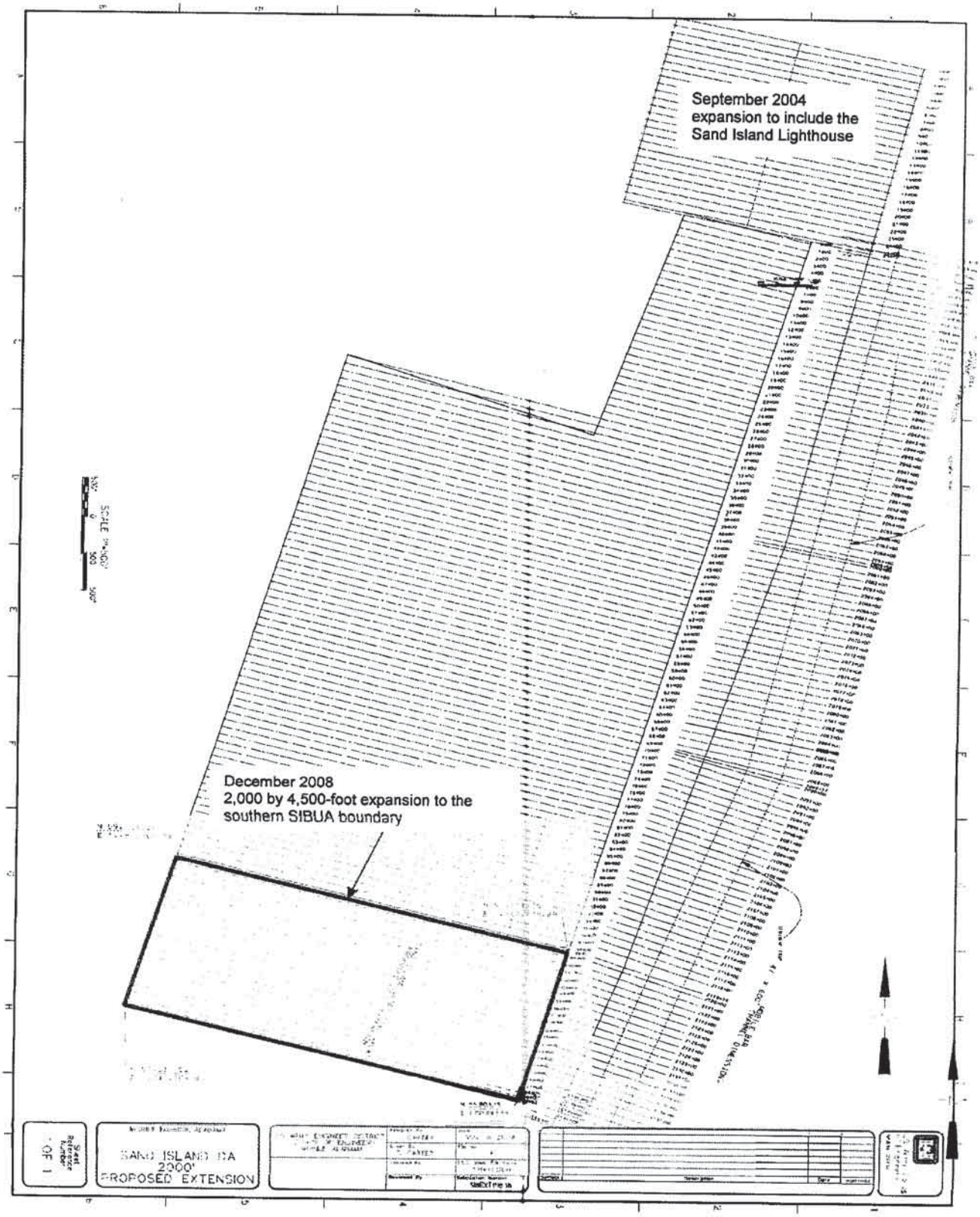


Figure 2. September 2004 and December 2008 SIBUA expansion areas.

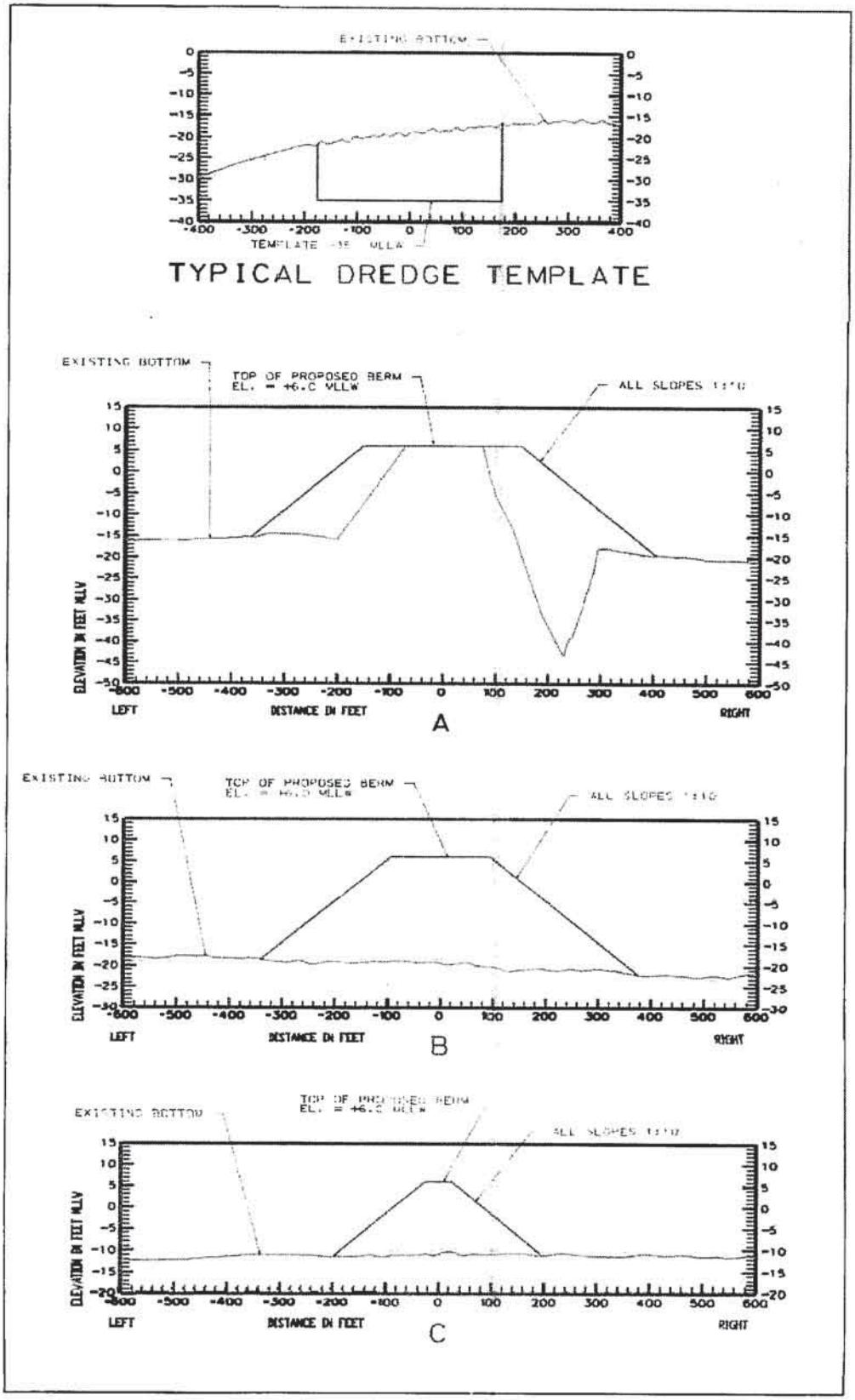


Figure 4. Proposed Sand Island cross sections

Table 1:

Fishery Management Plans and Managed Species for the Gulf of Mexico area (2004)

Gulf of Mexico Fishery Management Council

Shrimp Fishery Management Plan
- brown shrimp-*Farfantepenaeus aztecus*
- pink shrimp-*F. duorarum*
- royal red shrimp-*Pleoticus robustus*
- white shrimp-*Litopenaeus setiferus*

Red Drum Fishery Management Plan
- red drum-*Sciaenops ocellatus*

Reef Fish Fishery Management Plan
- almaco jack-*Seriola rivoliana*
- anchor tilefish-*Caulolatilus intermedius*
- banded rudderfish-*S. zonata*
- blackfin snapper-*Lutjanus buccanella*
- blackline tilefish-*Caulolatilus cyanops*
- black grouper-*Mycteroperca bonaci*
- blueline tilefish-*C. microps*
- cubera snapper-*L. cyanopterus*
- dog snapper-*L. juco*
- dwarf sand perch-*Diplectrum bivittatum*
- gag grouper-*M. microlepis*
- goldface tilefish-*C. chrysops*
- goliath grouper-*Epinephelus itajara*
- gray snapper-*L. griseus*
- gray triggerfish-*Balistes capriscus*
- greater amberjack-*S. dumerili*
- hogfish-*Lachnolaimus maximus*
- lane snapper-*Lutjanus synagris*
- lesser amberjack-*S. fasciata*
- mahogany snapper-*L. mahogoni*
- marbled grouper-*E. inermis*
- misty grouper-*E. mystacinus*
- mutton snapper-*L. analis*
- Nassau grouper-*E. striatus*
- queen snapper-*Etelis oculatus*
- red hind-*Epinephelus guttatus*
- red grouper-*E. morio*
- red snapper-*L. campechanus*
- rock hind-*E. adscensionis*
- sand perch-*Diplectrum formosum*
- scamp grouper-*M. phenax*
- schoolmaster-*L. apodus*
- silk snapper-*L. vivanus*
- snowy grouper-*E. niveatus*
- speckled hind-*E. drummondhayi*
- tilefish-*Lopholatilus chamaeleonticeps*
- vermillion snapper-*Rhomboplites aurorubens*
- Warsaw grouper-*E. nigritus*
- wenchman-*Pristipomoides aquilonaris*
- yellowedge grouper-*E. lavolimbatus*
- yellowfin grouper-*M. venenosa*
- yellowmouth grouper-*M. interstitialis*
- yellowtail snapper-*Ocyurus chrysurus*

Stone Crab Fishery Management Plan
- Florida stone crab-*Menippe mercenaria*
- gulf stone crab-*M. adina*

Spiny Lobster Fishery Management Plan
- spiny lobster-*Panulirus argus*
- slipper lobster-*Scyllarides nodife*

Coral and Coral Reef Fishery Management Plan
- several hundred varied species of coral and coral reefs

Coastal Migratory Pelagic Fishery Management Plan
- cobia-*Rachycentron canadum*
- king mackerel-*Scomberomorus cavalla*
- Spanish mackerel-*S. maculatus*

ENCLOSURE 6

STATE HISTORIC PRESERVATION OFFICIER (SHPO)
CORRESPONDENCE

TKP
PD-EI
CF PD-EL

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

TEL: 334-242-3184
FAX: 334-240-3477

FRANK W. WHITE
EXECUTIVE DIRECTOR

February 18, 2011

Kenneth P. Bradley
USACE Mobile District
P.O. Box 2288
Mobile, Alabama 36628-0001

Re: AHC 11-0274
COE FP10-MH15-10
Re-establishment of Sand Island Light
Sand Island Light 406 Oil Mitigation
Mobile County, Alabama

Dear Mr. Bradley:

Thank you for the additional information forwarded by your office. We have reviewed this data and consulted with Mr. Joe Giliberti of your office. Following this consultation we have determined that we concur with the proposed action based upon .3 nautical mile AEZ as depicted in the documentation.

We appreciate your efforts on this project and we look forward to working with you. Should you have any questions, please contact Greg Rhinehart at (334) 230-2662. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/SGH/GCR/gcr

ENCLOSURE 7

LEGAL NOTICE
PROOF OF PUBLICATION

PRESS-REGISTER
LEGAL AFFIDAVIT

U.S. ARMY CORP
P.O. BOX 2288
attn: Larry Parsons /PD-EC
109 St. Jospeh St.
MOBILE, AL 36628

Name:U.S. ARMY CORP
Account Number:1111748
Ad Number:0001717757

Sales Rep: Christine Bevins
251-219-5000

Billing Inquiries Please Call: (251) 219-5424

Date	Position	Description	P.O. Number	Ad Size	Total Cost
01/28/2011	Other legals	LEGAL NOTICE OF REQUEST FOR STATE CERTIF		421 WDS	147.43

Mecia Carlson being sworn, says that she is bookkeeper of Press-Register which publishes a daily newspaper in the City and County of Mobile, State of Alabama:
and attached notice appeared in the issue of

Press-Register01/28/2011

Mecia Carlson

Sworn to and subscribed before me this 28th day of January 2011

Brandi Cook
NOTARY PUBLIC

FOR QUESTIONS CONCERNING THIS AFFIDAVIT, PLEASE CALL MECIA CARLSON AT (251) 219-5418. YOU CAN PLACE A LEGAL NOTICE BY EMAIL OR FAX: LEGALS@PRESS-REGISTER.COM OR FAX# (251) 219-5037

LEGAL NOTICE OF REQUEST FOR STATE CERTIFICATION OF ACTIVITIES REQUIRING A FEDERAL LICENSE OR PERMIT

The U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT, hereby gives notice that it will be requesting State of Alabama water quality certification from the Alabama Department of Environmental Management for maintenance dredging and placement activities associated with the Sand Island Oil Mitigation Project, Mobile County, Alabama. The Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for re-establishing Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action will be from the Sand Island Beneficial Use Area (SIBUA), which is an approved disposal site for the Mobile Bar Navigation Channel, and the Mobile Bar Channel. The funding made available for this effort is additional funding over and above the Corps' normal maintenance dredging costs for the Mobile Federal Navigation Channel. The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. In addition to oil mitigation, this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. This action also provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Details of the proposed actions were discussed in Joint Public Notice No. FP10-MH15-10 and the comment period closed January 20, 2011. In compliance with requirements of Section 401 of Federal Pollution Control Act (33 U.S.C. 1251, 1341) (the Act) as amended by PL 95-217, the Federal Water Pollution Control Act Amendments, the U.S. Army Corps of Engineers has requested certification from the Alabama Department of Environmental Management that the above mentioned activities will be in compliance with applicable provisions of Section 301 (33 U.S.C. 1131), Section 302 (33 U.S.C. 1312), Section 303 (33 U.S.C. 1313), Section 306 (33 U.S.C. 1316), and Section 307 (33 U.S.C. 1317) of the Act and appropriate requirements of the State law. Any person wishing to make comments pertinent to these actions must submit such comments in writing to the U.S. Army Corps of Engineers, Mobile District, P.O. Box 2288, Mobile, Alabama 36628-0001; ATTN: CESAM-PD-EC, within 14 days of the date of publication of this notice. Contact Mr. Larry Parson of the Mobile District Office at (251) 690-3139 or email larry.e.parson@usace.army.mil for additional information concerning this project.

Press Register
January 28, 2011

ENCLOSURE 8

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
(ADEM)
CORRESPONDENCE
WQC/CZC

LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

March 30, 2011

MR. CURTIS FLAKES
U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

RE: CWA Section 401 (a) Water Quality Certification and Coastal Consistency
FP10-MH15-10 /// Sand Island 406 Oil Mitigation Project
Mobile County
ADEM Tracking ID: 2011-058-COEP

Dear Mr. Flakes:

This office has completed its review of the above referenced joint public notice and all associated materials submitted related to the proposal by the U.S. Army Corps of Engineers (USACOE) to place approximately one to two million cubic yards of sand, dredged from the Mobile Bar Channel, for use towards the re-establishment of Sand Island, near the Gulf of Mexico, Mobile County, Alabama. The initial source of sand will be from portions of the Sand Island Beneficial Use Area (SIBUA) with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement of the sand will begin at and around the Sand Island Lighthouse proceeding to the northwest creating an emergent island, with additional future periodic placement of sand onto Sand Island.

USACOE's advertisement of this project by joint public notice with ADEM has been completed. On the basis of a review of all materials submitted and associated with the proposal, it is the opinion of the ADEM that a decision relative to water quality certification is appropriate.

Action pertinent to water quality and coastal zone management certification is required by Section 401(a) (1) of the Clean Water Act, 33 U.S.C. §1251, et. seq., and the Alabama Coastal Area Management Program. If conducted in accordance with the conditions prescribed herein, ADEM hereby issues official certification for a period not to exceed five (5) years from the date of issuance that there is reasonable assurance that the discharge resulting from the proposed activities as submitted will not violate applicable water quality standards established under Section 303 of the Clean Water Act and §22-22-9(g), Code of Alabama (1975). Furthermore, ADEM hereby **agrees** with the USACOE's determination of consistency with the Alabama Coastal Area Management Program conditional upon continued compliance with the management program and conditions prescribed herein.

The ADEM certifies that there are no applicable effluent limitations under Sections 301 and 302 nor applicable standards under Sections 306 and 307 of the Clean Water Act in regard to the activities specified. However, regulations promulgated by the EPA requiring discharge permits for storm water runoff from individual and commercial facilities may be applicable. This certification does not address the requirements of those regulations.

To minimize impacts to Alabama's state waters and coastal resources, the following conditions must be incorporated into **FP10-MH15-10**.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S. W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

1. The ADEM must be notified of the starting date and expected completion date prior to the Sand Island re-establishment project implementation.

2. The USACOE and/or its assigns **shall** allow any duly authorized employee of the ADEM or its contractors, or Attorney General or District Attorney to enter upon the premises associated with the project authorized by this permit for the purposes of ascertaining compliance with the terms and conditions of the permit and with the rules and regulations of the ADEM.

3. The USACOE and/or its assigns must implement appropriate, effective Best Management Practices (BMPs) for prevention and control of nonpoint sources of pollutants, during and after project implementation.

4. The USACOE and/or its assigns shall conduct **daily** inspections of the sand placement activities during the life of the project to ensure that in-stream turbidity resulting from active dredging or return water from a disposal area will not cause the discharge of sediment into wetlands, substantial visible contrast with the receiving waters greater than 400 feet from the activity or result in an increase of 50 NTUs above background turbidity levels in the receiving waters. The USACOE and/or its assigns must suspend operations should downstream turbidity exceed upstream turbidity by 50 NTUs. The USACOE and/or its assigns shall **immediately** notify the ADEM Coastal Program Satellite Office at (251) 432-6533 of resultant work stoppage.

5. Upon the loss or failure of any treatment facility, BMP, or other management measure as identified by responsible on-site staff during day-to-day operations or as identified by ADEM technical staff during facility inspections, the USACOE and/or its assigns shall, where necessary to maintain compliance with this certification, suspend, cease, reduce, or otherwise control work/activity and all discharges until effective treatment is restored. The USACOE and/or its assigns shall **immediately** notify the ADEM Coastal Program Satellite Office at (251) 432-6533 of resultant work stoppage.

In recognition that projects are site specific in nature and conditions can change during project implementation, the ADEM reserves the right to require the submission of additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure the protection of water quality and coastal resources.

Liability and responsibility for compliance with this certification are not delegable by contract or otherwise. The USACOE shall ensure that any agent, contractor, subcontractor, or other person employed by, under contract, or paid a salary by the USACOE complies with this certification. Any violations resulting from the actions of such person shall be considered violations of this certification and may result in an enforcement action.

This certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, and in no way purports to vest in the USACOE title to lands now owned by the State of Alabama nor shall it be construed as acquiescence by the State of Alabama of lands owned by the State that may be in the USACOE's possession.

Contact Jennifer Robinson [jrobinson@adem.state.al.us 251/432-6533] anytime with questions. Refer to the ADEM Tracking ID referenced above when corresponding on this matter.

Sincerely,

Steven O. Jenkins, Chief
Field Operations Division

SOJ/jcr File: CZCERT/12532

Enclosure (3 pages)

E-copy: Larry Parson, U.S. Army Corps of Engineers
Matthew Lang, U.S. Army Corps of Engineers
Rosemary Hall, USEPA Region IV, Atlanta
Patric Harper, USFWS, Daphne
Mark Thompson, NMFS, St. Petersburg
Carl Ferraro, ADCNR, Spanish Fort

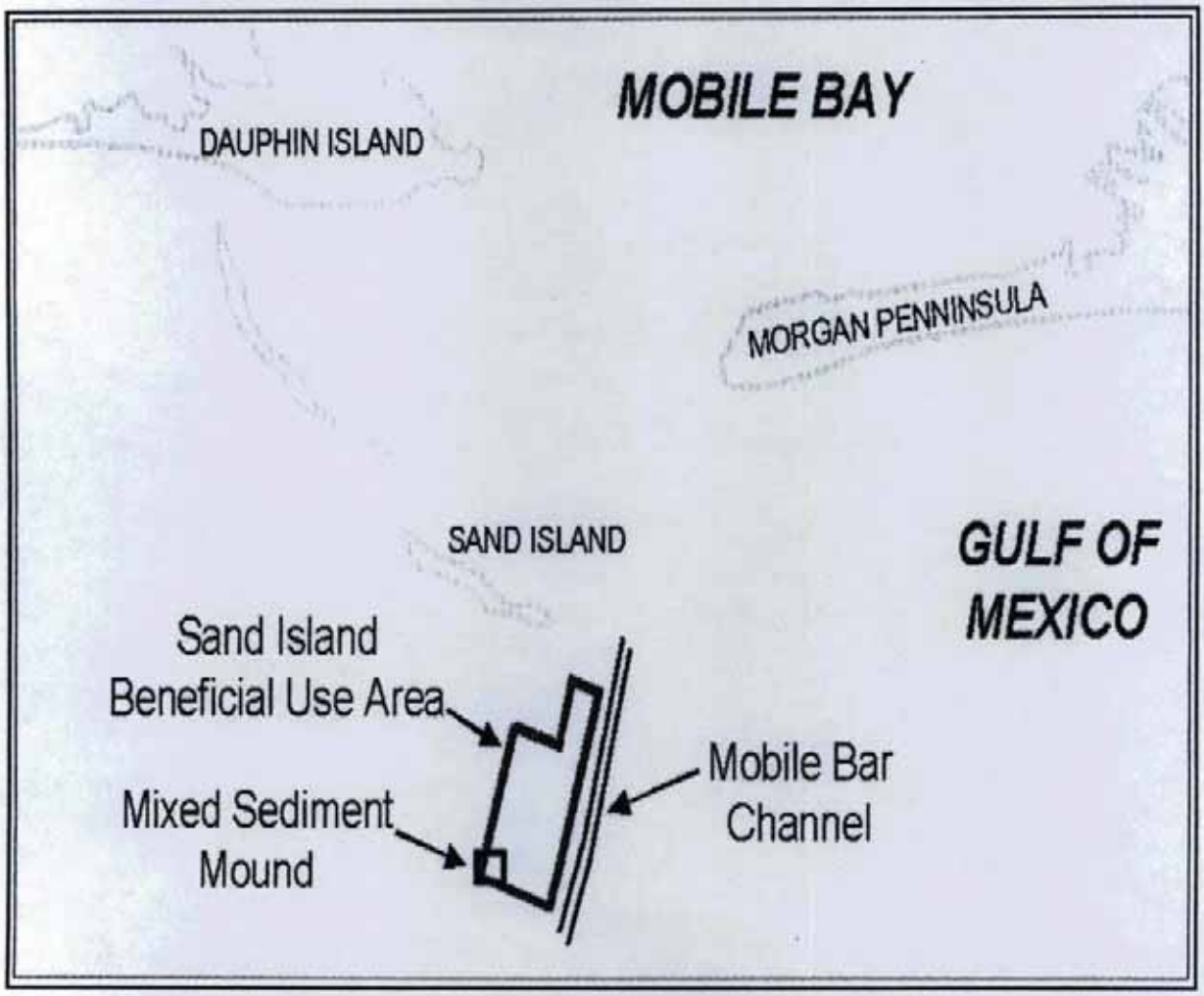


Figure 1. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

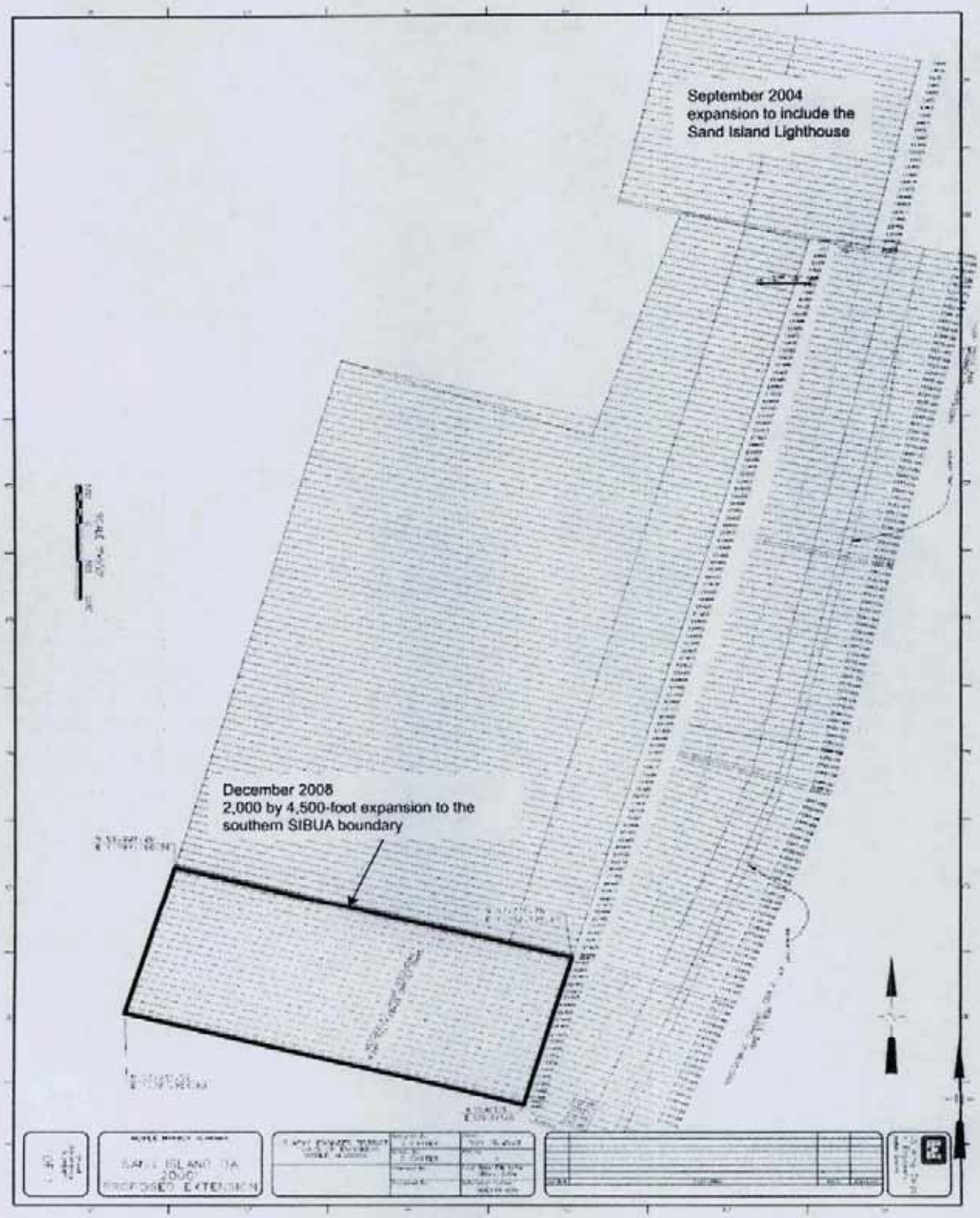


Figure 2. September 2004 and December 2008 SIBUA expansion areas.

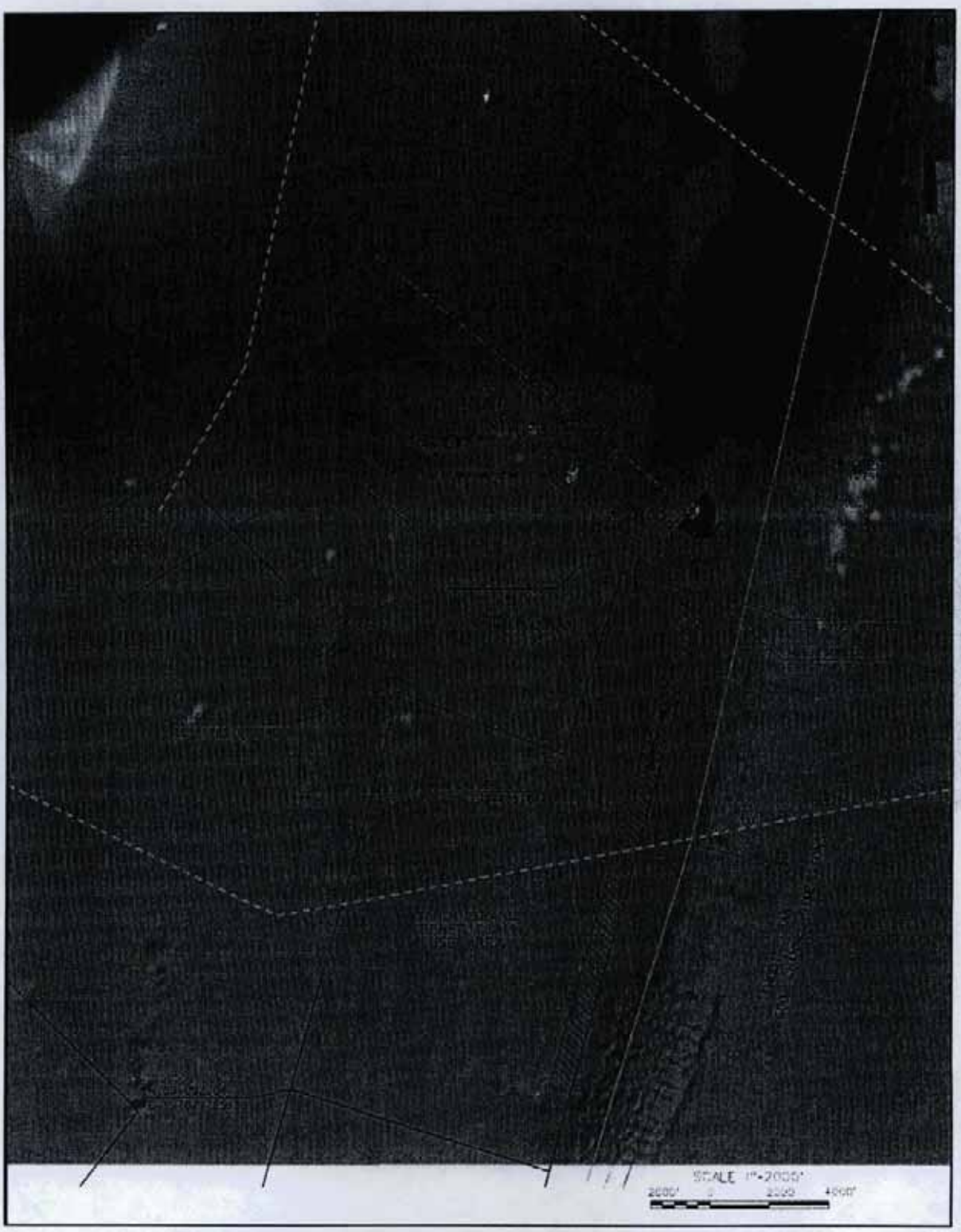


Figure 3. Proposed Sand Island plan view

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

REPLY TO
ATTENTION OF

March 10, 2011

Coastal Environment Team
Planning and Environmental Division

Mr. Scott Brown
Alabama Department of Environmental Management
4171 Commander's Drive
Mobile, Alabama 36615

Dear Mr. Brown:

Pursuant to the requirements of the Clean Water Act and Coastal Zone Management Act, water quality certification and coastal zone consistency are requested for a five year period for the proposed mitigation of the impacts associated with the Deepwater Horizon Oil spill in the Gulf of Mexico for the reestablishment of Sand Island. The needed sediment for this proposed action would be excavated from the Sand Island Beneficial Use Area (SIBUA). The SIBUA serves as a disposal area for the Mobile Bar Channel which is a federal navigation project in southern Mobile County, Alabama. A detailed description of the current proposed action is described in the enclosed Public Notice No. FP10-MH15-10 dated December 20, 2010 (Enclosure 1).

The project has been coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service through normal agency correspondence pertaining to endangered and/or threatened species and Essential Fish Habitat, respectively. Those agencies concurred with the project in the enclosed e-mail notifications (Enclosures 2, 3 and 4). The Alabama State Historical Preservation Office was coordinated with and agency concurrence is included as Enclosure 5.

The required legal notice was published in the Mobile Register, Mobile, Alabama for a 15-day period beginning January 28, 2011. Proof of publication for the legal notice is included in Enclosure 6. No comments in response to the legal notice were received.

The U.S. Army Corps of Engineers, Mobile District received a comment letter to our Public Notice No. FP10-MH15-10 from Hand Arendall, LLC (Enclosure 7) dated January 20, 2011. Mobile District's response is included in Enclosure 8.

Based on a review of the Alabama Coastal Zone Management Program, we find that the proposed action is consistent with the program to the maximum extent practicable. If you have any questions concerning the proposed action, please contact Mr. Matthew J. Lang at (251) 694-3837 or at email address matthew.j.lang@usace.army.mil.

Sincerely,

Curtis M. Flakes
Chief, Planning and Environmental
Division

Enclosures

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

CESAM-PD-EC
PUBLIC NOTICE NO. FP10-MH15-10 **December 20, 2010**

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
AND
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SAND ISLAND 406 OIL MITIGATION
MOBILE, ALABAMA
FEDERALLY AUTHORIZED

RE-ESTABLISHMENT OF SAND ISLAND

Interested persons are hereby notified that the U.S. Army Corps of Engineers (Corps), Mobile District, proposes to place at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico. Under the authority included below, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for re-establishing Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action will be from the Sand Island Beneficial Use Area (SIBUA) and the Mobile Bar Channel. The funding made available for this effort will be additional funding over and above the District's normal maintenance dredging costs for the Mobile Bar Channel.

This public notice is issued in accordance with rules and regulations published in the Federal Register on 26 April 1988. These regulations provide for the review of the dredging programs for federally authorized projects. These laws are applicable whenever dredged or fill material may enter navigable waters. The recipient of this notice is requested specifically to review the proposed action as it may impact on water quality, relative to the requirements of Section 404(b)(1) of the Clean Water Act. We also request comments on any other potential impacts.

WATERWAY AND LOCATION: Mobile Bar Channel, Sand Island, and the Gulf of Mexico, Mobile County, Alabama.

PROJECT AUTHORIZATION: Sec 406 of P.L. 111-212 Supplemental Funds.

SEC. 406. (a) The Secretary of the Army may use funds made available under the heading ''OPERATION AND MAINTENANCE'' of this chapter to place, at full Federal expense, dredged material available from maintenance dredging of existing Federal navigation channels located in the Gulf Coast region to mitigate the impacts of the Deepwater Horizon Oil spill in the Gulf of Mexico.

(b) The Secretary of the Army shall coordinate the placement of dredged material with appropriate Federal and Gulf Coast State agencies.

(c) The placement of dredged material pursuant to this section shall not be subject to a least-cost-disposal analysis or to the development of a Chief of Engineers report.

(d) Nothing in this section shall affect the ability or authority of the Federal Government to recover costs from an entity determined to be a responsible party in connection with the Deepwater Horizon Oil spill pursuant to the Oil Pollution Act of 1990 or any other applicable Federal statute for actions undertaken pursuant to this section.

DESCRIPTION OF PROPOSED ACTION: The Corps conducts maintenance dredging and disposal activities in the Mobile Bar Channel on a one to two year cycle. The primary disposal area for the material removed from the bar channel includes an area known as the SIBUA as illustrated in **Figure 1.** The beneficial use area is located west of the Federal navigation channel and is intended to keep valuable sand removed from the bar channel in the local littoral system. In September 2004 a modification of the SIBUA was issued to expand the disposal site to include the area around the Sand Island Lighthouse (**Figure 2**), which is a valuable cultural resource listed on the National Register of Historic Places. Placement of sandy material around the light house's rubble foundation is beneficial in that it provides protection to the historic structure. In order to continue beneficial use practices, in December 2008 the Corps expanded the SIBUA extending a 4,500-foot wide southern boundary approximately 2,000 to the south, also illustrated in **Figure 2**. This expanded area provides for continued placement of sandy material from the Mobile Bar Channel in a manner that returns this material to the local littoral system.

Under the proposed Sand Island 406 Oil Mitigation action, the Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for use towards re-establishment of Sand Island. The initial source of sand will be from portions of the SIBUA with options for future placement from the regular maintenance dredging of sand from the Mobile Bar Channel. Placement will begin at and around the Sand Island Lighthouse proceeding to the northwest as far as the supplemental funding source allows. Funding made available for this effort will be additional funding over and above the District's normal maintenance dredging costs for the Mobile Bar Channel, which provides options for additional future periodic placement of sand onto the Island.

The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. The proposed Sand Island plan view is presented in **Figure 3** with

the resulting cross sections illustrated in **Figure 4**. The intent of this action is to prevent, as much as possible, submerged oil in the Gulf of Mexico from entering into the entrance of Mobile Bay. Doing so will provide protection to the fragile ecosystems and valuable natural resources that are an important and integral part of the Mobile Bay system.

In addition to oil mitigation, this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. Also, this action provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Re-establishing the island to include the lighthouse will provide valuable protection to the historic structure.

WATER QUALITY CERTIFICATION: Pursuant to the requirements of the Clean Water Act, a state water quality certification will be requested from Alabama Department of Environmental Management (ADEM) to cover the activities associated with the proposed removal of material from the SIBUA for placement and construction of the island. A decision relative to water quality certification will be made by ADEM upon completion of the required comment period for this public notice and other coordination with the appropriate agencies.

COASTAL ZONE CONSISTENCY: Pursuant to the Coastal Zone Management Act, the proposed action is consistent with the Alabama Coastal Management Program to the maximum extent practicable. Upon completion of the required comment period and completed coordination with the appropriate agencies, a decision relative to coastal zone consistency will be made by ADEM.

USE BY OTHERS: The proposed action is not expected to create significant impacts on land and water use plans in the vicinity of the project. Use of the waters in the vicinity of the project area includes commercial shipping, fishing and recreational boating.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) CONSIDERATIONS:
In accordance with the requirements of the NEPA impacts associated with the Sand Island Oil Mitigation activities a draft Environmental Assessment (EA) has been prepared and is available for review in the Corps, Mobile District Office or online at http://www.sam.usace.army.mil/pd/Pd1.htm. Based on the conclusion presented in the draft EA, it is determined that the implementation of the proposed action would not result in long-term adverse impacts and that no significant cumulative impacts would occur. Upon finalization of the draft EA, a Findings of No Significant Impacts (FONSI) will be prepared.

SECTION 404 (B)(1) EVALUATION REPORT: In accordance with Public Law 92-500, Section 404(b)(1) Guidelines promulgated by the U.S. Environmental Protection Agency under the Clean Water Act, an evaluation of water quality impacts associated with the proposed action was prepared in accordance with guidelines promulgated by the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act. Impacts associated with this action include a temporary increase in turbidity and suspended solids concentrations in and adjacent to the dredging and placement areas, short-term elimination of benthic organisms and localized short-term degradation of esthetics near the disposal area. A draft 404(b)(1) Evaluation Report

has been prepared and is available for review in the Corps, Mobile District Office or online at http://www.sam.usace.army.mil/pd/Pd1.htm. Recent sediment quality investigations performed in the channel show the material to be substantially free of contaminants of concern and suitable for placement in the Sand Island site.

ENDANGERED/THREATENED SPECIES: Coordination for the proposed action is being conducted with the U.S. Department of the Interior, Fish and Wildlife Service (FWS), and the U.S. Department of Commerce, National Marine Fisheries Service (NMFS). Some species listed by the FWS and NMFS as endangered or threatened are occasional visitors to the vicinity of the project area. Impacts to sea turtles and Gulf sturgeon associated with hopper dredging activities have been evaluated by NMFS in the November 19, 2003 Regional Biological Opinion (RBO) entitled "Dredging of the Gulf of Mexico Navigation Channels and Sand Mining Areas Using Hopper Dredges (Consultation Number F/SER/2000/01287). Based on the determination made by the Corps, Mobile District, no endangered or threatened species or their critical habitats will be adversely impacted by the proposed action.

ESSENTIAL FISH HABITAT: Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity". The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. The NMFS has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments. These habitats include estuarine areas, such as estuarine emergent wetlands, seagrass beds, algal flats, mud, sand, shell, and rock substrates, and the estuarine water column. The habitat in the project area, which is located just outside the mouth of Mobile Bay, consists of Gulf of Mexico waters and sandy substrate consistent with sediment along the northern Gulf of Mexico. The NMFS has management plans for brown shrimp (*Penaeus aztecus*), white shrimp (*P. setiferus*), red drum (*Sciaenops oellatus*), and Spanish mackerel (*Scomberomorus maculatus*) within the project area. Based on the time that it would take to complete the dredging and disposal, and the size of the proposed placement areas in relation to the total available acreage of similar habitat within the Gulf of Mexico, the Corps has determined that the proposed action would result in long-term adverse effects to EFH.

CULTURAL RESOURCES CONSIDERATION: Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended and implementing regulations 36 CFR Part 800 requires consultation with other agencies to avoid or minimize adverse effect on historical, architectural, archaeological, and cultural resource. In order to ensure compliance, cultural resources are being evaluated via a literature review and existing data which focused on archaeological resources (shipwrecks). The information gathered from these sources will be used to characterize and assess the potential effects of the proposed project. A preliminary evaluation revealed that there were several possible ship wrecks in the vicinity of the SIBUA. A secondary benefit from placement of sandy material around the light house's rubble foundation will be providing protection to the historic structure which is a valuable cultural resource listed on the National Register of Historic Places. This action will be coordinated with the Alabama State Historic Preservation Officer.

EVALUATION: The decision whether to proceed with the proposed action would be based on an evaluation of the overall public interest. That decision would reflect the national concerns for both protection and utilization of important resources. The benefits that may be expected to accrue from this proposal must be balanced against its reasonably foreseeable detriments. The decision whether to proceed and the conditions under which the activity would occur would be determined by the outcome of this general balancing process. All factors that may be relevant to the proposed action would be considered. Among these are conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the public. The proposed action would proceed unless it is found to be contrary to the overall public interest. Inasmuch as the proposed work would involve the discharge of materials into navigable waters, specification of the proposed disposal sites associated with this Federal project is being made through the application of guidelines promulgated by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army. If these guidelines alone prohibit the specification of any proposed disposal site, any potential impairment of the maintenance of navigation, including any economic impacts on navigation and anchorage that would result from the failure to use this site would also be considered.

COORDINATION: Among the agencies receiving copies of this public notice are:

Region 4, U.S. Environmental Protection Agency
U.S. Department of the Interior, Fish and Wildlife Service, Daphne, Alabama
Bon Secour National Wildlife Refuge, Fish and Wildlife Service
Regional Director, National Park Service
U.S. Department of Commerce, National Marine Fisheries Service, Panama City, Florida
U.S. Department of Commerce, National Marine Fisheries Service, Protected Species Branch, St. Petersburg, Florida
Commander, Eighth Coast Guard District
Alabama State Historic Preservation Officer
Alabama Department of Environmental Management
Alabama Department of Conservation and Natural Resources
Gulf of Mexico Fishery Management Council
U.S. Department of Agriculture, Natural Resources Conservation Service

Other Federal, State, and local organizations, affiliated Indian Tribe interests, and U.S. Senators and Representatives of the State of Alabama are being sent copies of the notice and are being asked to participate in coordinating this proposed work.

CORRESPONDENCE: Any person who has an interest that may be affected by the proposed activity may request a public hearing. Any comments or requests for a public hearing must be submitted in writing to the District Engineer within 30 days of the date of this public notice. A request for a hearing must clearly set forth the interest that may be affected and the manner in which the interest may be affected. You are requested to communicate the information

contained in this notice to any other parties who may have an interest in the proposed activities. Correspondence concerning the public notice should refer to Public Notice No. FP10-MH15-10 and should be directed to the Commander, U.S. Army Engineer District Mobile, P.O. Box 2288, Mobile, Alabama 36628-0001, ATTN: CESAM-PD-EC. For additional information please contact Larry Parson at (251) 690-3139.

CURTIS M. FLAKES
U.S. Army Corps of Engineers
Mobile District

Enclosure 1

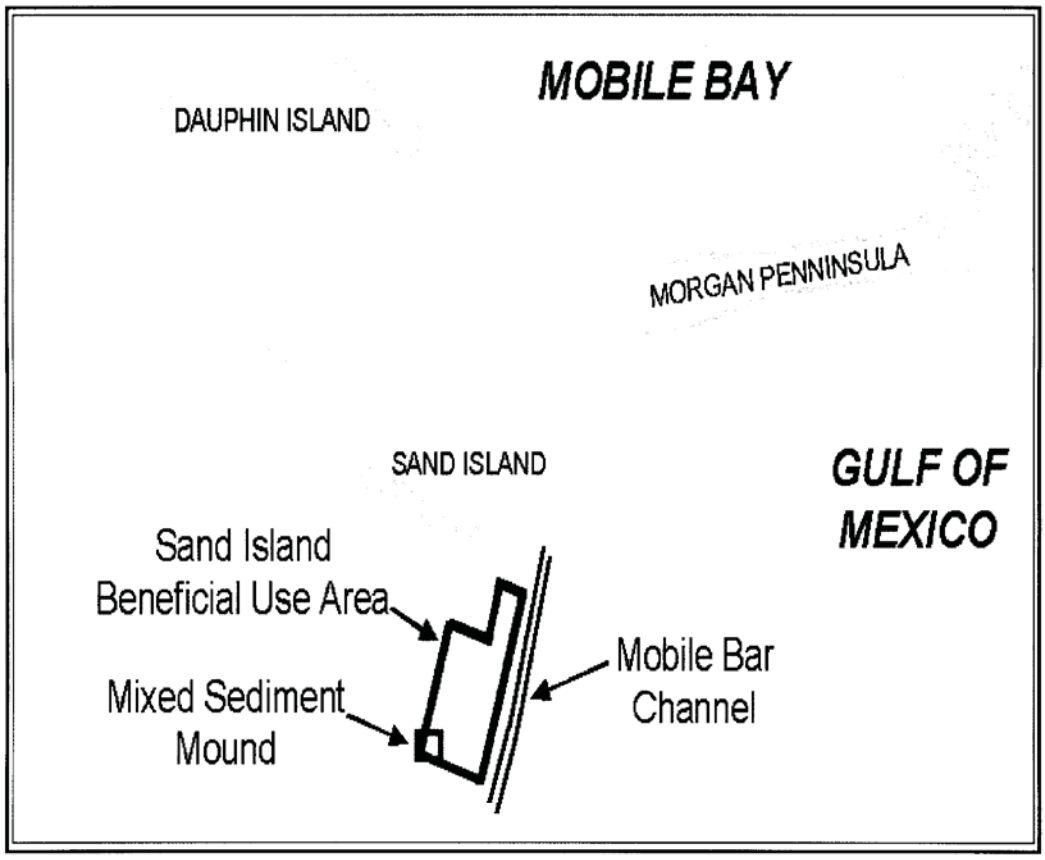


Figure 1. Location of the Mobile Bar Channel and Sand Island Beneficial Use Area (SIBUA)

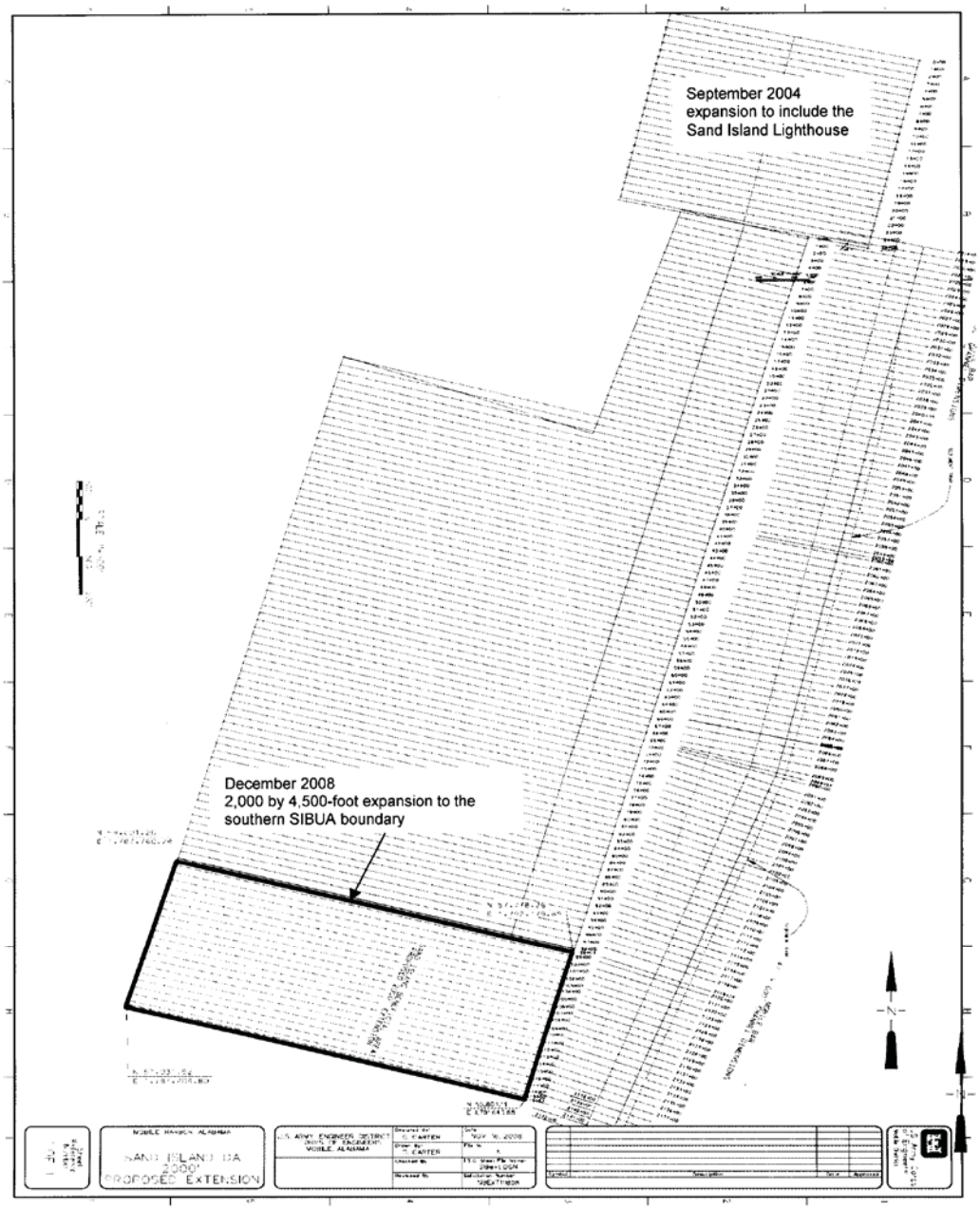


Figure 2. September 2004 and December 2008 SIBUA expansion areas.

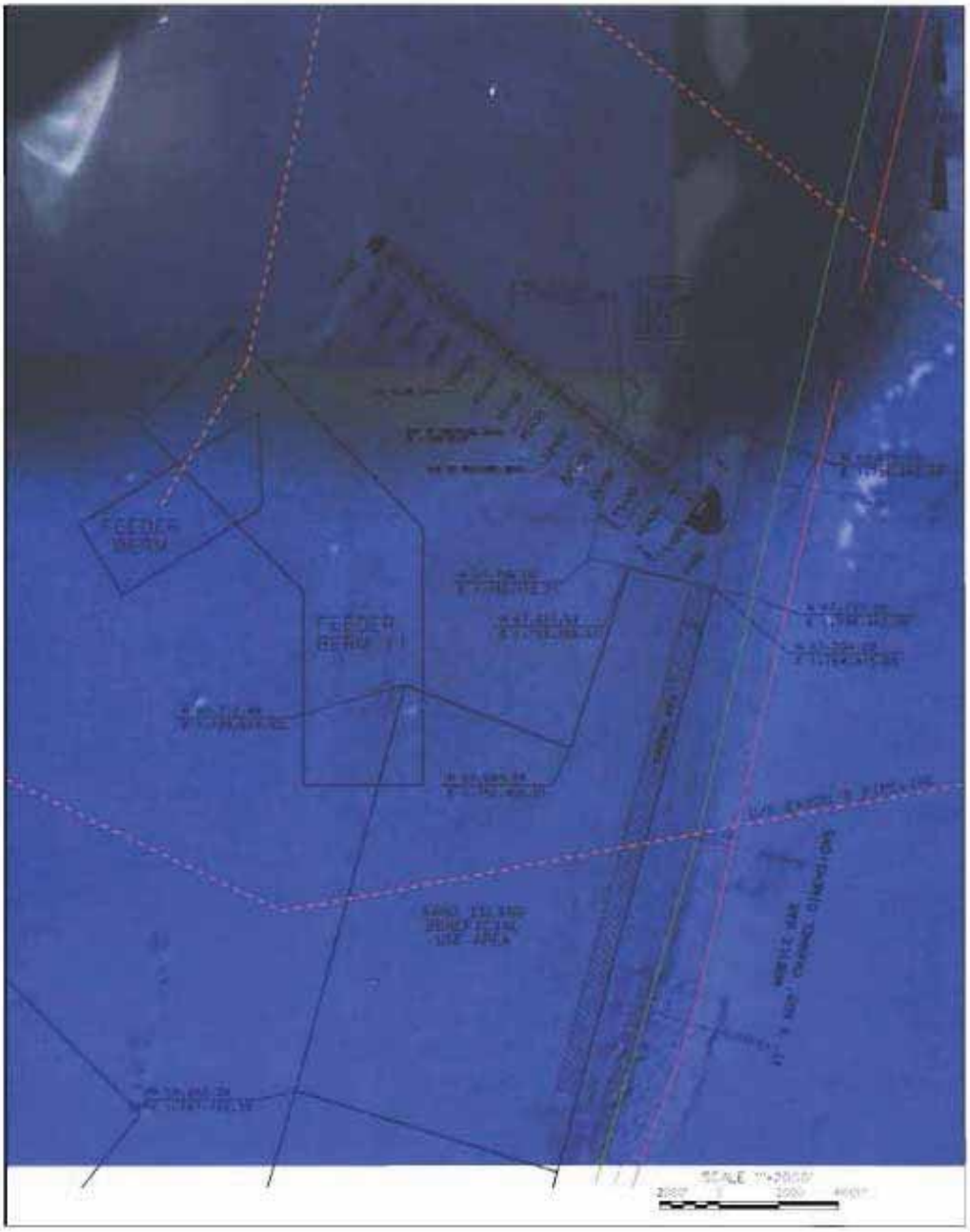


Figure 3. Proposed Sand Island plan view

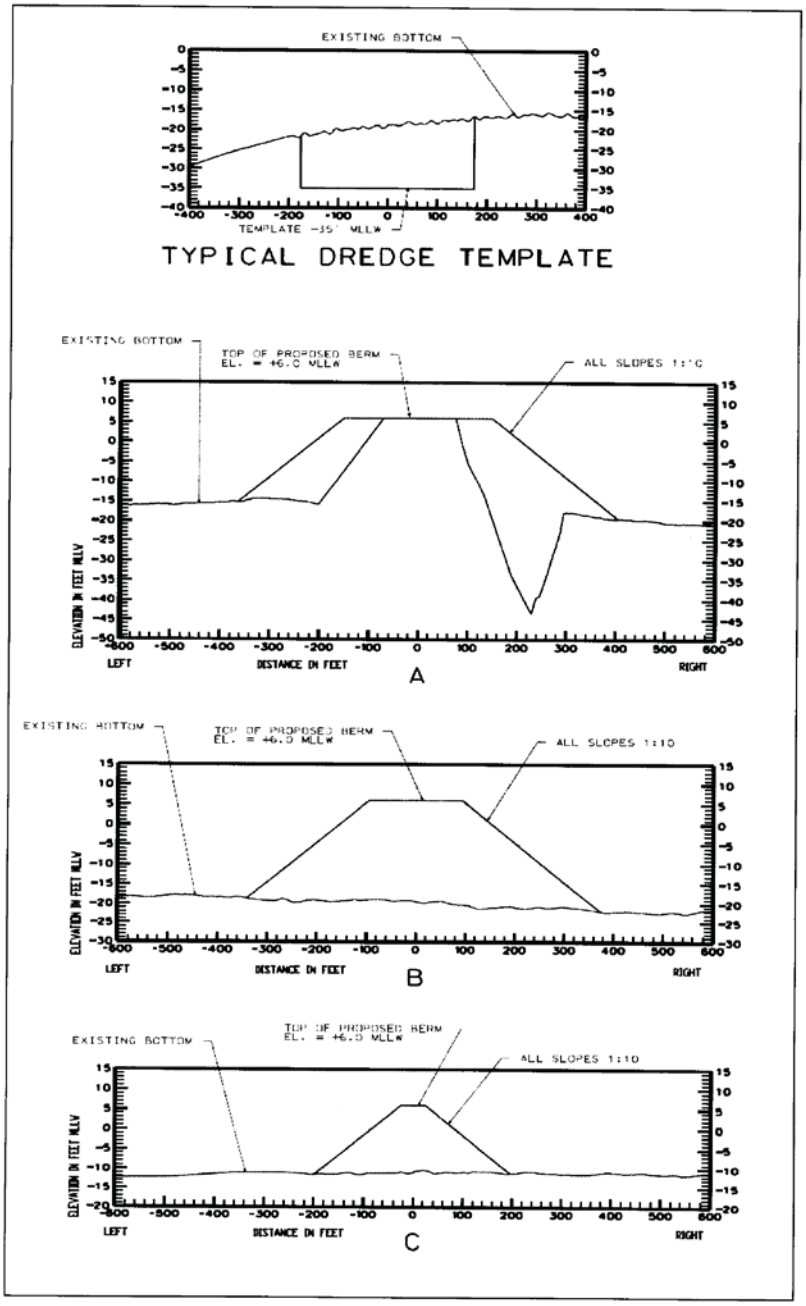


Figure 4. Proposed Sand Island cross sections

Lang, Matthew J SAM

From: Parson, Larry E SAM
Sent: Wednesday, December 22, 2010 7:45 AM
To: Jacobson, Jennifer L SAM; Lang, Matthew J SAM
Subject: FW: FP10-MH15-10 (UNCLASSIFIED)
Attachments: Manatee Construction Conditions - 08.doc

Classification: UNCLASSIFIED
Caveats: FOUO

-----Original Message-----
From: Patric_Harper@fws.gov [mailto:Patric_Harper@fws.gov]
Sent: Tuesday, December 21, 2010 3:59 PM
To: Parson, Larry E SAM
Subject: FP10-MH15-10

Larry,

The U. S. Fish and Wildlife Service has reviewed the public notice concerning the proposed re-establishment of Sand Island as a barrier to submerged oil in the Gulf from entering the entrance to Mobile Bay (FP10-MH15-10). No significant adverse effects on fish and wildlife resources, under the Service's purview, are expected to result from this project as long as the applicant implements our Standard Manatee Construction Conditions (attached). Keeping the cutterhead or suction head of the dredge buried in the sediment during operation is the critical factor. Coordination with NOAA should be implemented for the Gulf sturgeon.
Therefore, we have no objections to the issuance of this permit.
Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C.
1531 et seq.).

FWS log # 2011-CPA-0050

(See attached file: Manatee Construction Conditions - 08.doc)

Patric Harper
US Fish & Wildlife Service
1208-B Main St.
Daphne, AL 36526
(251) 441-5857 wk
(251) 441-6222 fax
http://www.fws.gov/daphne

Classification: UNCLASSIFIED
Caveats: FOUO

Lang, Matthew J SAM

From: Ryan Hendren [Ryan.Hendren@noaa.gov]
Sent: Tuesday, December 21, 2010 3:04 PM
To: Lang, Matthew J SAM
Cc: Parson, Larry E SAM; Jacobson, Jennifer L SAM
Subject: Re: DRAFT Sand Island PN (UNCLASSIFIED)
Attachments: Ryan_Hendren.vcf

Matt:

I apologize for not getting back to you sooner. I have been concentrating on a few big projects for your district that I am working on trying to get through before the end of the year.

Upon review of your public notice for the Sand Island 406 Oil Mitigation project (FP10-MH15-10), it is NMFS opinion that it will be covered by the GRBO (F/SER/2000/01287) and no further consultation will be needed.
That being said, we would strongly encourage the USACE to execute the dredging/mitigation efforts in the months of May-July in an effort to help Gulf sturgeon that do utilize this area for winter foraging. The idea being that the newly dredged material will have time to recolonize in time for the winter migration. As for the Manatee, it is solely under the purview of USFWS and you will need to consult with them on the effects.

If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action, consultation will need to be reestablished.

Please contact me if you have any additional questions. -rH

On 12/7/2010 2:51 PM, Lang, Matthew J SAM wrote:
> Classification: UNCLASSIFIED
> Caveats: FOUO
>
> Ryan:
>
> Per our telephone discussion this morning I have attached a DRAFT
> public notice and project figure for the proposed Sand Island Oil
> Mitigation work south of the mouth of Mobile Bay and Dauphin Island.
>
> The area of concern is outside of Gulf sturgeon critical habitat and
> the proposed work would most likely be conducted by a hopper dredge
> which should be covered under the GRBO (a pipeline could potentially
> be used which also was addressed in the GRBO, but we would not know
> for sure which procedure would be implemented until much later in the process).
>
> Additionally, Patric Harper of USFWS suggested that manatee may be
> under your purview this far out, is that true?
>
> Please look this DRAFT notice over as I would like to get your
> feedback as to the nature of our coordination so that we may initiate
> the proper level of correspondence needed.
>
> Thank you.....Matt
>

Lang, Matthew J SAM

From:	Mark Thompson [Mark.Thompson@noaa.gov]
Sent:	Monday, January 03, 2011 2:43 PM
To:	Jacobson, Jennifer L SAM
Cc:	Parson, Larry E SAM; Lang, Matthew J SAM; Patric Harper; Rosemary Hall; Veronica Beech; Susan Dingman
Subject:	Public Notice number FP10--MH15-10 dated December 20, 2010, and letter dated December 23, 2020, regarding the re-establishment of Sand Island in the Gulf of Mexico, Mobile County, Alabama.

NOAA's National Marine Fisheries Service (NMFS), Habitat Conservation Division, has received the public notice dated December 20, 2010, regarding the re-establishment of Sand Island in the Gulf of Mexico, Mobile County, Alabama, and to your letter dated December 23 , 2010, initiating essential fish habitat (EFH) consultation and providing an EFH Assessment for the proposed construction.This request was initiated pursuant to the consultation provisions of the Magnuson-Stevens Conservation and Management Act (Magnuson-Stevens Act).

You state that your office does not believe that the project will result in significant impacts to EFH.We have reviewed the EFH Assessment and determined the NMFS does not any EFH conservation recomendations to offer.

Thank you for you effort to comply with the EFH provisions of the Magnuson-Stevens Act.

--
Mark Thompson, Team Leader
Habitat Conservation Division
Florida Gulf Coast, Alabama, Mississippi Panama City Office 850-234-5061 Fax 850-234-2492

TKP
PD-EI
CF PD-EL

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

FRANK W. WHITE
EXECUTIVE DIRECTOR

TEL: 334-242-3184
FAX: 334-240-3477

February 18, 2011

Kenneth P. Bradley
USACE Mobile District
P.O. Box 2288
Mobile, Alabama 36628-0001

Re: AHC 11-0274
COE FP10-MH15-10
Re-establishment of Sand Island Light
Sand Island Light 406 Oil Mitigation
Mobile County, Alabama

Dear Mr. Bradley:

Thank you for the additional information forwarded by your office. We have reviewed this data and consulted with Mr. Joe Giliberti of your office. Following this consultation we have determined that we concur with the proposed action based upon .3 nautical mile AEZ as depicted in the documentation.

We appreciate your efforts on this project and we look forward to working with you. Should you have any questions, please contact Greg Rhinehart at (334) 230-2662. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/SGH/GCR/gcr

Enclosure 5

PRESS-REGISTER
LEGAL AFFIDAVIT

U.S. ARMY CORP
P.O. BOX 2288
attn: Larry Parsons /PD-EC
109 St. Jospeh St.
MOBILE, AL 36628

Name:U.S. ARMY CORP
Account Number:1111748
Ad Number:0001717757

Sales Rep: Christine Bevins
251-219-5000

Billing Inquiries Please Call: (251) 219-5424

Date	Position	Description	P.O. Number	Ad Size	Total Cost
01/28/2011	Other legals	LEGAL NOTICE OF REQUEST FOR STATE CERTIF		421 WDS	147.43

Mecia Carlson being sworn, says that she is bookkeeper of Press-Register which publishes a daily newspaper in the City and County of Mobile, State of Alabama:
and attached notice appeared in the issue of

Press-Register01/28/2011

Mecia Carlson

Sworn to and subscribed before me this 28th day of January 2011

Brandi Cook
NOTARY PUBLIC

FOR QUESTIONS CONCERNING THIS AFFIDAVIT, PLEASE CALL MECIA CARLSON AT (251) 219-5418. YOU CAN PLACE A LEGAL NOTICE BY EMAIL OR FAX: LEGALS@PRESS-REGISTER.COM OR FAX# (251) 219-5037

LEGAL NOTICE OF REQUEST FOR STATE CERTIFICATION OF ACTIVITIES REQUIRING A FEDERAL LICENSE OR PERMIT

The U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT, hereby gives notice that it will be requesting State of Alabama water quality certification from the Alabama Department of Environmental Management for maintenance dredging and placement activities associated with the Sand Island Oil Mitigation Project, Mobile County, Alabama. The Corps is proposing the placement of approximately 1 to 2 million cubic yards (cy) of sand for re-establishing Sand Island, beginning at the Sand Island Lighthouse and proceeding to the northwest. The source of sand for this action will be from the Sand Island Beneficial Use Area (SIBUA), which is an approved disposal site for the Mobile Bar Navigation Channel, and the Mobile Bar Channel. The funding made available for this effort is additional funding over and above the Corps' normal maintenance dredging costs for the Mobile Federal Navigation Channel. The proposed action will create an emergent island in a manner that will begin a re-establishment of the original Sand Island. In addition to oil mitigation, this action would provide an excellent opportunity towards accelerating the return of sediment into the local littoral system as well as increasing disposal capacity in the SIBUA consistent with established regional sediment management principles and goals. This action also provides an excellent opportunity for the protection of the Sand Island Lighthouse which is a valuable cultural resource. Details of the proposed actions were discussed in Joint Public Notice No. FP10-MH15-10 and the comment period closed January 20, 2011. In compliance with requirements of Section 401 of Federal Pollution Control Act (33 U.S.C. 1251, 1341) (the Act) as amended by PL 95-217, the Federal Water Pollution Control Act Amendments, the U.S. Army Corps of Engineers has requested certification from the Alabama Department of Environmental Management that the above mentioned activities will be in compliance with applicable provisions of Section 301 (33 U.S.C. 1131), Section 302 (33 U.S.C. 1312), Section 303 (33 U.S.C. 1313), Section 306 (33 U.S.C. 1316), and Section 307 (33 U.S.C. 1317) of the Act and appropriate requirements of the State law. Any person wishing to make comments pertinent to these actions must submit such comments in writing to the U.S. Army Corps of Engineers, Mobile District, P.O. Box 2288, Mobile, Alabama 36628-0001; ATTN: CESAM-PD-EC, within 14 days of the date of publication of this notice. Contact Mr. Larry Parson of the Mobile District Office at (251) 690-3139 or email larry.e.parson@usace.army.mil for additional information concerning this project.

Press Register
January 28, 2011

Enclosure 6

Neil C. Johnston
Real Estate, Land Use & Timber Section
Direct Dial (251) 694-6247
Direct Fax (251) 544-1618
njohnston@handarendall.com

HAND ARENDALL LLC ▪ LAWYERS

RSA TOWER ▪ 11 NORTH WATER STREET, SUITE 30200 ▪ MOBILE, ALABAMA 36602 ▪ (251) 432-5511
Post Office Box 123 ▪ Mobile, Alabama 36601 ▪ Facsimile: (251) 694-6375

January 20, 2011

Colonel Steven J. Roemhildt, P.E.
Commander, Department of Army
Mobile District Corps of Engineers
Attn: CESAM-DE
P. O. Box 2288
Mobile, Alabama 36628-0001

Re: Public Notice No. FP10-MH15-10
1) Re-establishment of Sand Island
2) Alternative and Additional Sources of Dredged Material

Dear Colonel Roemhildt:

We have received and reviewed the Public Notice No. FP10-MH15-10 describing the proposal to re-establish Sand Island as a barrier island adjacent to and extending northwest of the Sand Island Lighthouse. We have also reviewed the historic and recent studies referenced including the draft Environmental Assessment, the draft 404(b)(1) Evaluation Report, and other documents pertaining to the project and reuse or beneficial use of dredged material. In addition to comments presented to the proposed re-establishment, we also provide comments and further requests for use of alternative and supplemental sources of dredged materials.

A. Re-establishment of Sand Island.

1. General. The proposed action provides an excellent opportunity to restore numerous ecological and beneficial features of Mobile Bay and the Gulf of Mexico as well as provide a substantial benefit to the marine environment, to historical and cultural resources, and to the public. We support the proposed actions as presented.

2. Benefits. There are numerous benefits to the Sand Island re-establishment including recreation of a barrier island, restoration of fishery habitats, providing an upland island for local and migratory birds, nesting for sea turtles, providing shallow and deepwater habitat, providing historical and cultural protection and restoration for the Lighthouse, providing an excellent example of reuse and beneficial use of dredged material, providing storm surge protection, and in addition to these public benefits, providing numerous recreational and commercial benefits.

Enclosure 7

B. Use of Alternative and Additional Sources of Dredged Materials. Upland disposal sites on the Black Warrior – Tombigbee Rivers Waterway and the Alabama-Coosa Rivers Waterway provide an excellent source of alternative and additional sources of dredged material suitable for use for habitat restoration and creation, shoreline protection and re-establishment of barrier islands. For many years, I have had the pleasure of working with numerous private landowners on each river system and working with the Corps of Engineers to find alternatives to establishing and maintaining upland disposal sites which are destructive of riverbank, overflow, hardwood bottomland, habitat and wetland areas. There are numerous upland disposal sites along the rivers including those near the Jackson Bar, Sunflower Bar and several mounds of dredged material located at the Buena Visa Bar at River Mile 109 north of Mobile. I have attached copies of certain photographs illustrating the extent and volume of some of the sites.

We have objected in the past to the continued acquisition and use of upland sites, and suggested that projects such as the re-establishment of Sand Island create a substantial opportunity to restore the upland habitats by utilizing the materials stored there, transporting the material downstream and depositing the material at Sand Island on a continuous basis. The reuse process would reduce or alleviate the need for any upland sites and the existing sand and gravel and additional material from ongoing maintenance dredging can be used. Eventually the existing upland sites could be returned to their natural conditions and functions while the barrier island is restored and maintained, and the Lighthouse is protected. The westward littoral drift of the sand and natural erosion of the Island will also naturally feed Pelican Island and other barrier islands to the west. The benefits of using these alternative and additional sources of dredged material (habitat restoration, protection of historic properties, creation of habitat for fisheries, sea turtles, shore birds and neotropicals, flood and storm surge protection, as well as restoring river hardwood bottomland properties) should be much greater than any of the cost to implement and maintain such a program.

Use of these alternative and additional sources of dredged material would also protect and help restore adjacent lands, sloughs, drainage ways and ponds where the disposal sites and material have eroded and degraded these areas with silt and sedimentation. The use of upland sites has taken hundreds of acres of valuable timberlands out of production as well as shut down farming and destroyed wildlife habitat.

As you are aware, the Corps of Engineers has had a beneficial use program in effect for quite some time. In the Mobile District, the Corps has been studying dredged material suitability for commercial uses and beach re-nourishment, and in 2002 a position of beneficial use coordinator was established by Colonel Robert Keyser in response to numerous discussions we had concerning the destructive nature of the upland spoil sites and past practices of dredge disposal. Since the 2002 Energy and Water Development Appropriations Bill authorized the investigation of recycling dredged material as an alternative to disposal of dredged material in

upland sites, we request that a program be implemented to obtain the dredged material from the upland sites for use during the re-establishment of Sand Island.

There are millions of cubic yards of material available in the upland disposal sites. Use of this alternative source and recycling program is supported by private landowners where the upland disposal areas are located, by the Corps of Engineers, the Alabama Department of Conservation and Natural Resources, by conservation groups and by Congress.

There are ongoing programs in Florida, Mississippi and Louisiana for recycling projects like this. As an example, I enclose for you a copy of the 2002 explanation of the Coastal Wetlands Planning, Protection & Restoration Act description of activities in Louisiana. This is the same report that we provided to your predecessors in 2002 during our discussions about the recertification of proposed maintenance dredging and disposal for the Black Warrior-Tombigbee Waterway operations.

Please keep me up to date on the progress of the project and whether we can work out an alternative source program.

Yours very truly,

Neil C. Johnston
For the Firm

NCJ:lhm
Enclosures
cc: Dr. Susan I. Rees
Mr. Curtis M. Flakes
Mr. and Mrs. Robert Ware
Mr. Robert Keyser
1180263_1

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

REPLY TO
ATTENTION OF

FEB 15 2011

Coastal Environment Team
Planning and Environmental Division

Mr. Neil C. Johnston
Hand Arendall, LLC
RSA Tower
11 North Water Street, Suite 30200
Mobile, Alabama 36602

Dear Mr. Johnston:

Please reference your letter dated January 20, 2011, concerning Public Notice Number FP10-MH15-10 (Enclosure). I would like to extend my appreciation for your support of the Sand Island oil mitigation project. Although the main objective is to mitigate the impacts of the Deepwater Horizon Oil spill, this effort also provides an opportunity to begin reestablishment of Sand Island, accelerate the return of sediment into the local littoral system, enhance environmental resources, and provide much needed protection to the historic Sand Island Lighthouse. The U.S. Army Corps of Engineers (Corps), Mobile District shares your desire and agrees with your position that sediment contained in the upland disposal sites on the Black Warrior-Tombigbee (BWT) and the Alabama-Coosa Rivers Waterways may provide a potential source of sand for actions such as this. As you pointed out, use of these sediments would reduce the need for additional upland disposal capacity and provide numerous environmental benefits that are also in the interest of the Corps' maintenance dredging program.

We have examined the feasibility of using these upland sediments for coastal applications such as those mentioned in your letter. Our findings concluded that although the sediment matches favorably to the local coastal sands in terms of its quartz content and grain size, it is considered to be incompatible due to its color and was not considered further as a source of sand for this particular project. The upland sediments exhibit a pale yellow-tan color while the local coastal sands are translucent quartz grains with a pale white to light gray color. The coloring appears to be a uniform thin grain-surface staining or coating, likely an iron-manganese oxide that is not a part of the mineral grain structure itself, likely the result of an earlier depositional environment. As such, use of this material for direct beach application such as that for Sand Island is questionable from an environmental standpoint. Therefore, the Sand Island Beneficial Use Area was considered our most viable source of material for this project.

It may be possible that exposing upland river sand to the open marine environment would allow the sediment to rapidly bleach out, thus, becoming more compatible with local coastal sediments. The Corps is conducting a demonstration project to evaluate the performance of material from upland river disposal sites associated with the Federal navigation channel of the

BWT for beach and nearshore placement applications. The demonstration project will consist of placing some of this material around the eastern end of Dauphin Island where it will be exposed to such conditions. The placed sediment will be closely monitored to document changes in sand volume and sand color over time. If the demonstration exhibits positive results, it may open numerous opportunities for use of this material for coastal applications consistent with established regional sediment management principles and goals.

I hope this letter provides you with sufficient information to better understand the Corps' position on the use of upland river sediments. Should you have additional questions or require any further information, please contact Mr. Larry Parson at (251) 690-3139.

Sincerely,

Steven J. Roemhildt, P.E.
Colonel, Corps of Engineers
District Commander

Enclosure

ELIGIBILITY REVIEW

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Alabama Barrier Island Restoration Through Beneficial Use of Dredged Sediments

PROPOSAL NUMBER

AL-1

LOCATION

Sand/Pelican/Dauphin Island Complex; Mobile County, Alabama

SPONSOR(S)

Alabama

TYPE OF FUNDING REQUESTED (Planning, Technical Assistance, Implementation)

Planning/Technical Assistance/Implementation

REVIEWED BY:

Bethany Carl Kraft/ Ben Scaggs

DATE:

11-18-14

1. Does the project aim to restore and/or protect natural resources, ecosystems, fisheries, marine and wildlife habitat, beaches, coastal wetlands and economy of the Gulf Coast Region?

◉ YES ○ NO

Notes:

Proposal seeks funding for Alabama Barrier Island Restoration through the beneficial use of dredged sediments.

2. Is the proposal a project?

◉ YES ○ NO

If yes, is the proposed activity a discrete project or group of projects where the full scope of the restoration or protection activity has been defined?

◉ YES ○ NO

Notes:

3. Is the proposal a program?

◯ YES ◉ NO

If yes, does the proposed activity establish a program where the program manager will solicit, evaluate, select, and carry out discrete projects that best meet the program's restoration objectives and evaluation criteria?

◯ YES ◯ NO

Notes:

4. Is the project within the Gulf Coast Region of the respective Gulf States?

◉ YES ◯ NO

If no, do project benefits accrue in the Gulf Coast Region?

◯ YES ◯ NO

Notes:

Eligibility Determination

ELIGIBLE

Additional Information

Proposal Submission Requirements

1. Is the project submission overall layout complete? ***Check if included and formatted correctly.***

A. Summary sheet	☑	F. Environmental compliance checklist	☑
B. Executive summary	☑	G. Data/Information sharing plan	☑
C. Proposal narrative	☑	H. Reference list	☑
D. Location information	☑	I. Other	☑
E. High level budget narrative	☑		

If any items are NOT included - please list and provide details

2. Are all proposal components presented within the specified page limits (if applicable)?

◉ YES ○ NO

Notes: