DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
MISSISSIPPI COASTAL IMPROVEMENTS PROGRAM
PASCAGOULA BEACH BOULEVARD RESTORATION PROJECT
JACKSON COUNTY, MISSISSIPPI

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DRAFT

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1.0 <u>PURPOSE OF AND NEED FOR THE PROPOSED ACTION</u>. The Pascagoula Beach Boulevard Restoration Project was authorized by Public Law 110-28, *Supplemental Appropriations Bill - Public Law 110-28, U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007,* as part of the Mississippi Coastal Improvements Program (MsCIP) for Hancock, Harrison, and Jackson Counties, Mississippi. The original project consists of: (1) the repair of a concaved seawall; (2) replacement and extension of existing drainage structures; (3) fill and placement of 7,700 feet of geotubes; (4) excavation of approximately 290,000 cubic yards of sand from the upper river portions of the Pascagoula Federal navigation channel; and (5) the associated placement of sand along 7,700 feet of the Pascagoula waterfront in the Mississippi Sound, as shown on Figure 1. Impacts associated with this project were discussed in the MsCIP Environmental Assessment (EA), Section 404 (b)(1) Evaluation, and the Finding of No Significant Impact (FONSI), dated June 28, 2006. Findings of this EA, Section 404 (b)(1) Evaluation, and FONSI determined no significant impacts would occur as a result of this Pascagoula Beach Boulevard Restoration MsCIP Interim Project.

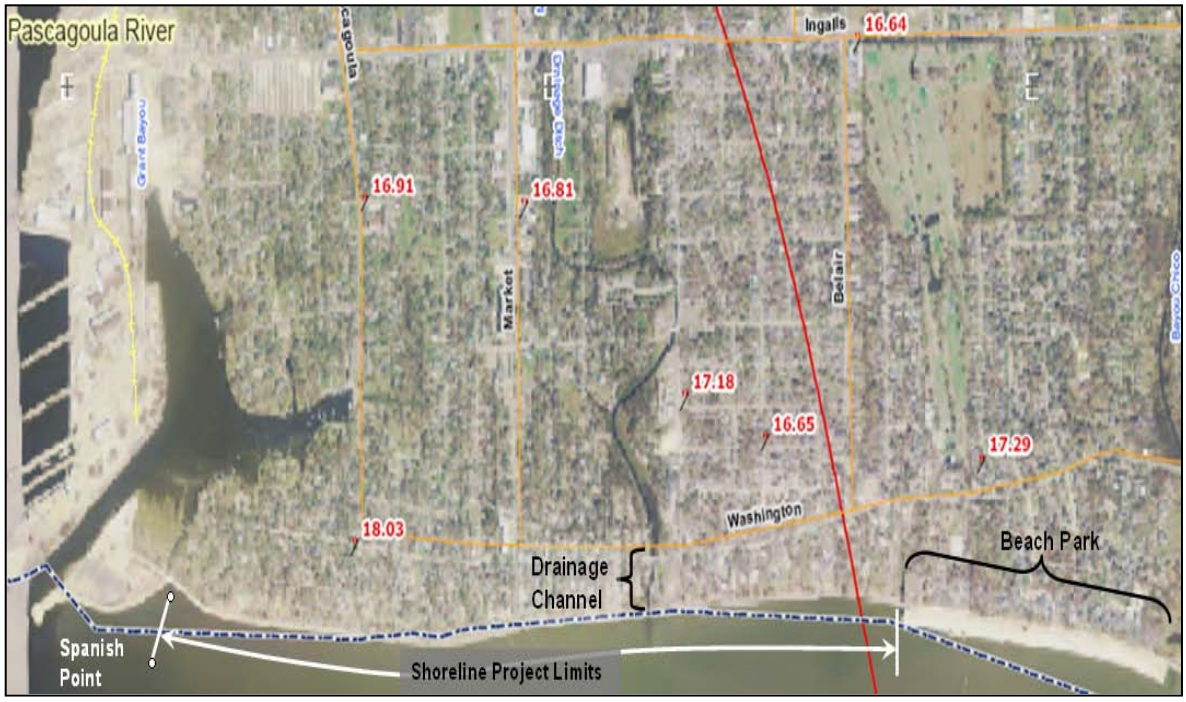

Figure 1: Vicinity Map of Pascagoula Beach Boulevard Restoration Project Area

During development of project plans, detailed engineering and analysis revealed the existing project was in need of beach toe protection, to minimize the effects of erosion due to high wave energy from the Mississippi Sound. Project engineers determined additional improvements within the existing footprint of the project, in the form of vegetative and man-made erosion-control methods, were warranted to reduce erosion and to protect the existing geotubes associated with the original project. The placement of additional erosion control measures is outside of the MsCIP National Environmental Policy Act documentation; therefore the proposed project impacts have been discussed in this Supplemental EA and Section 404(b)(1) Evaluation Report.

The proposed project discussed in this Supplemental EA consists of erosion-control measures implemented on the toe of the beach along the entire length of the project. These include the placement of Class 2 riprap at elevation -1 MLLW (Mean Lower Low Water) along the entire length of the project to reduce wave energy, allowing establishment of vegetation and for additional protection of the beach and geotubes. The riprap shall be placed first using land-based mechanized methods. Vegetation will be established behind the riprap at elevation -1 to +3 MLLW. Species to be utilized include: *Spartina patens*. Additionally the use of Arbuscular Mycorrhizal Fungi (AMF) may be incorporated into the planting scheme to increase survivability of the vegetation. All work will be performed within the limits of the existing footprint of the project.

This additional portion of the project is critical in the success of the overall restoration project as it is needed to protect the beach from the high wave action of the Mississippi Sound and subsequent erosion. This in turn, also will protect the seawall, roadbed and residential areas along Pascagoula Beach Boulevard. Erosion control measures extend the life of beach restoration projects and increases the time before re-nourishment is needed. The planting of vegetation along the beach also improves wildlife habitat for marine and terrestrial species dependent upon aquatic and transitional habitats. Currently, no erosion control measures are implemented other than the geotubes from the original project. The wave energy from the Mississippi Sound will most likely remove the sand over time in front of the geotubes, exposing the geotubes to the elements and later eventually undermining the tubes. Factor in the weather patterns, including possible hurricanes, and the entire project could be undone in a few years. Considering the cost of the existing project and the overall intent for storm protection for the boulevard, it is imperative that additional measures be implemented to protect the restoration project. The purpose of this Supplemental EA is to determine if 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.

2.0. NATIONAL ENVIRONMENTAL POLICY ACT CONSIDERATION. The MsCIP EA and the FONSI, dated June 28, 2006, evaluated impacts for 15 Interim Projects, including the Pascagoula Beach Boulevard Restoration project. Findings of this EA and FONSI determined no significant impacts would occur as a result of this Pascagoula Beach Boulevard Restoration MsCIP Interim Project. This Supplemental EA, prepared by the U.S. Army Corps of Engineers (Corps), Mobile District, addresses potential impacts associated with the implementation of additional erosion control measures in the form of Class 2 riprap and the establishment of a emergent tidal marsh fringe along the entire length of the project.

The National Environmental Policy Act (NEPA) and Title 40 of the Code of Federal Regulations (CFR), CFR Parts 1500-1508 (40 CFR 1500-1508) require Federal agencies to consider the potential environmental consequences of proposed actions and alternatives. Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality (amended by EO 11991), provides policy directing the Federal government to take leadership in protecting and enhancing the environment.

3.0 DESCRIPTION OF THE PROPOSED ACTION. The proposed project consists of erosion-control measures implemented on the toe of the beach along the entire length of the project. These include the placement of Class 2 riprap at elevation -1 MLLW (Mean Lower Low Water), to reduce wave energy, allowing establishment of vegetation and for additional protection of the beach and geotubes (Figure 2.). The riprap shall be placed first using land-based mechanized methods. Vegetation will be established behind the riprap at elevation -1 to +3 MLLW. Species to be utilized include: *Spartina patens*. Additionally the use of Arbuscular Mycorrhizal Fungi (AMF) may be incorporated into the planting scheme to increase survivability of the vegetation. All work will be performed within the limits of the existing footprint of the project.

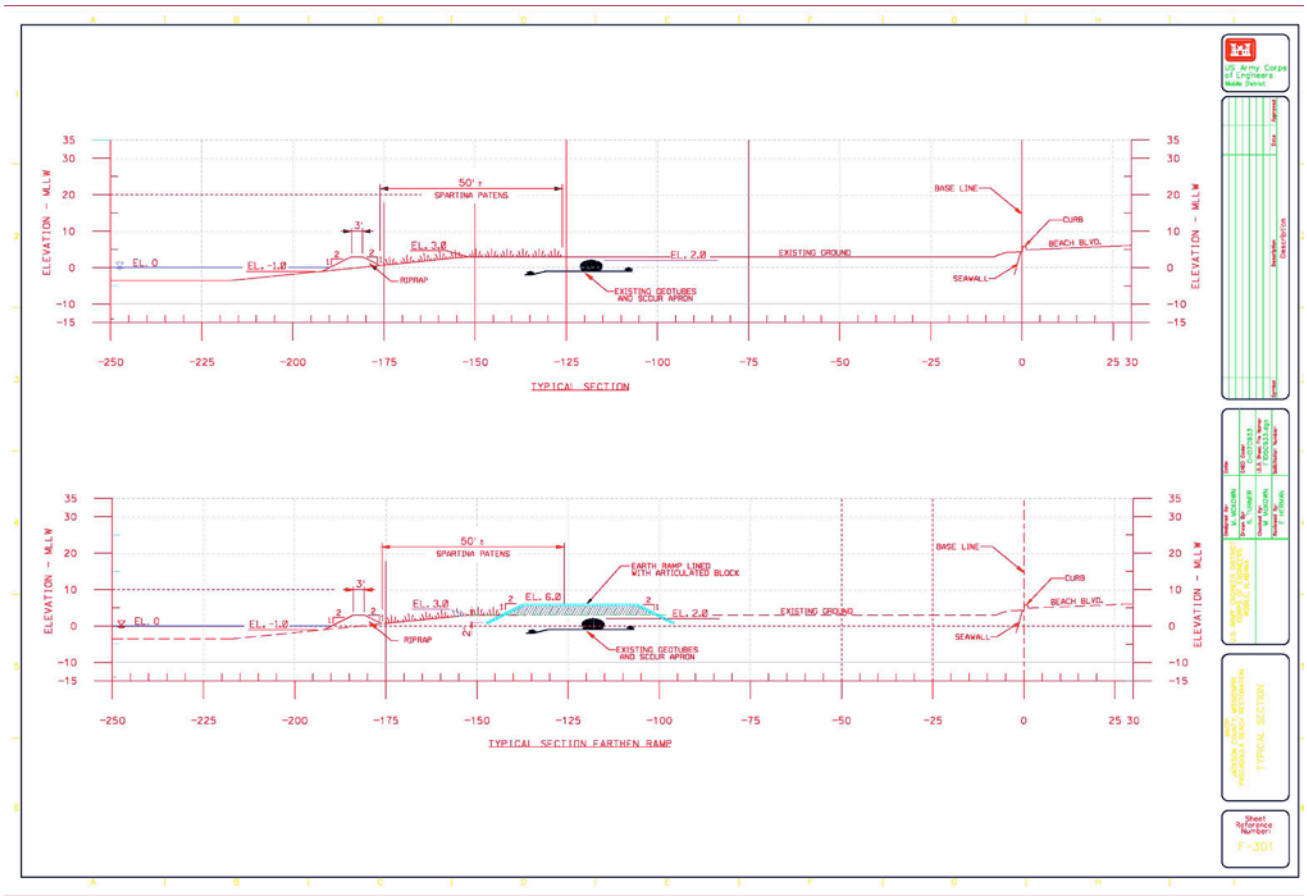

Figure 2: Proposed Erosion Control Measures Cross-Section

4.0. ALTERNATIVES TO THE PROPOSED PROJECT.

4.1. No Action. The No Action alternative was not considered a viable alternative for the proposed action. It is believed that greater negative structural, economic and environmental impacts will result from not implementing additional erosion control measures to protect the beach restoration project. Aside from losing the beach itself and the protection the beach provided to the seawall and roadbed; the lost sediment would likely migrate west-ward towards the Pascagoula River. The accumulated sediment would impede ship traffic and increase the frequency of needed dredging intervals.

The No Action alternative would not protect the beach restoration project from the high wave energy of the Mississippi Sound and the efforts could be lost. The original interim project described above would be constructed; however, if additional beach toe erosion control methods were not implemented, the benefits provided by the improvements of the beach would be reduced if not eliminated with time. Currently, the beach restoration project lacks erosion control measures besides the existing geotubes buried beneath the sand. The no-action alternative was not considered a viable alternative for the proposed action.

4.2. Proposed Action - The selected alternative, implementation of structural and vegetative erosion control methods, is being recommended for construction as it would provide improvements in the stability of the beach restoration project and provide for improved wildlife habitat. Currently, the beach toe of the beach restoration project is at the mercy of the Mississippi Sound tides and waves. Therefore, if the toe of the beach is not adequately protected, the benefits provided by the restoration project to the seawall and roadbed will be reduced, if not eliminated, due to the lack of viable protection measures. This alternative will result in minor localized impacts and proves to be the least environmentally damaging alternative. A detailed description of this proposed action is located in Section 3.0 of this Supplemental EA.

5.0. AFFECTED ENVIRONMENT.

5.1 Physiography. The geologic formations exposed on the surface of the Mississippi Gulf coast were deposited, beginning approximately 1.6 million years ago, atop the Pliocene and Miocene deposits. There are two major physiographic regions in the Mississippi coastal region. The Gulf Coast Flatwoods form an irregular belt through the southern half of the three-county region. This belt consists mainly of wet lowlands and poorly drained depressions, with some higher, adequately-drained areas. The second physiographic region, the Southern Lower Coastal Plain, is rolling and gently undulating interior uplands. Elevations range from sea level along the coast in Hancock, Harrison, and Jackson Counties to about 420 feet above sea level. The slope of the land surface is generally oriented to the south. The area is underlain by a thick sequence of sedimentary deposits dipping to the south and west.

Geologic processes have shaped the present configuration and geomorphology of the Mississippi Gulf coast for the past 1.6 million years, particularly in the past 18,000 years, and efforts of man to stabilize an eroding shoreline with structures and artificial fill. The Biloxi Formation is a transgressive unit deposited in marine and brackish water both nearshore and offshore. This

formation is not exposed along the coast, but is visible in the excavated banks of the Industrial Seaway in Gulfport. It consists of clays, fine sands, and sandy clays with abundant fossils, including both shells and microscopic fossils called foraminifers, which help to identify its environment of deposition (Otvos 1985). It ranges from 15 to 45 feet in thickness in Harrison County to as much as 120 feet thick in Jackson County.

5.2 Soils. Jackson County is in the extreme southeastern part of Mississippi. The total area of the county is 1,043 square miles, including land and water. Jackson County is comprised of several major soil types including Troup, Benndale, Harleston, and Atmore. The Troup series consists of well-drained, nearly level to gently sloping soils on uplands. These soils formed in unconsolidated marine sediments of loamy sands, sandy loams, and sandy clay loams. Water permeates through the sandy layers and in the loamy layers. Native vegetation consists of scrub oak, scattered longleaf or loblolly pine, and dogwood. Benndale series consists of well-drained soils on uplands. This series is prevalent in unconsolidated beds of sandy loams and sandy clay loams. Native vegetation consists of mainly longleaf and loblolly pines, dogwood, and various oaks. Harleston series consists of moderately well-drained soils. This series formed in marine or stream deposits consisting of thick beds of sandy loam. This series is prevalent on terraces and uplands of the Southern Coastal Plain. The Atmore series consists of deep, poorly drained, moderately slowly permeable soils that formed in loamy marine sediments. These soils are on slight depressions and gently sloping interstream divides of the coastal plain.

5.3 Biological Resources. Coastal Mississippi consists of several habitats including beaches, sand dunes, coastal maritime forests, emergent wetlands, submerged aquatic vegetation, rivers, tidal creeks, tidal flats, scrub/shrub wetlands, forested wetlands, and open-water benthic habitats. These areas are home to an immensely diverse, resilient, and environmentally significant group of species, including some threatened and endangered fauna. Ecological habitats within the project site include estuarine subtidal and intertidal waterbottoms populated with diverse benthic communities. Benthic communities vary depending on the substrate bottom types present in the area. Intertidal and subtidal water bottoms vary from sand to muddy sand to mud. Subtidal bottoms consist primarily of soft mud sediments (Christmas, 1973). There are no submerged aquatic beds in the vicinity of the project area. Generally, the submerged aquatic grasses are restricted to the northern shores of the barrier islands south of the mainland shoreline.

5.3.1 Coastal Flora. The vegetative communities in Coastal Mississippi are diverse; however, existing land use patterns have resulted in a great deal of modification of the natural plant associations. Terrestrial uplands dominate higher ground areas that are not normally subject to riverine flooding or tidal inundation. Natural upland vegetation complexes found in the area include longleaf pine oaks, moist pinelands, bay forests, monoculture pine, maritime strand, and beach dune associations. The most dominant upland association, longleaf pine oaks, is well adapted to the dry, sandy sites in the coastal plain region. This association is usually found above the 10-foot contour but sometimes integrates into the moist pinelands along streams and rivers. Other dominant species occurring in the community include: southern red oak (*Quercus falcata*), laurel oak (*Q. laurifolia*), live oak (*Q. virginiana*), southern magnolia (*Magnolia grandiflora*), flowering dogwood (*Cornus florida*), persimmon (*Diospyros virginiana*), winged sumac (*Rhus copallina*), sparkleberry (*Vaccinium arboreum*), and broomsedge (*Andropogon* spp.).

Forest coverage opens up when entering sandy areas near the coast. Vegetation consists largely of slash pine (*Pinus elliottii*) with an understory of saw palmetto (*Serenoa repens*) and wax myrtle (*Myrica cerifera*). This area, known as moist pinelands, differs from longleaf pine-oaks due to its higher water table. A thin strip of moist pinelands usually divides the floodplain swamps and longleaf pine-oak forests. Sedges, grasses, and other herbaceous plants grow in the understory area. Pitcher plant bogs are very noticeable with thousands of plants occupying a relatively small area. Depression in the land combined with the high water table produce standing water, which supports dense growths of freshwater, floating and submerged, aquatic plants.

The vegetative community in brackish to saline marshes consists of plants that have adapted physiologically to higher levels of salinity. Brackish marshes are more diverse than saline marshes and are characterized by black needle rush and saltmeadow cordgrass (*Spatina patens*). *S. Patens* is characteristic of the saline environment. A distinct zonation exists within brackish and saline marshes. Proceeding seaward from the upland, the number of species composing the community decreases until in the most saline conditions only smooth cordgrass (*S. alterniflora)* or black needle rush composed the marsh.

5.3.2. Coastal Fauna. Mammals found within the area include marsupials, moles and shrews, bats, armadillos, rabbits, rodents, carnivores, even-toed hoofed mammals, and dolphins. Mammals occur within all habitats of the system, using underground burrows, the soil surface, vegetative strata, the air, and the water for feeding, resting, breeding, and bearing and rearing young. Mammals, such as the bottle-nosed dolphin, marsh rabbit, cotton rat, swamp rabbit, river otter, and raccoon, are prevalent in the area. A number of whales are known to occur offshore Mississippi and Alabama.

5.4 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 National Marine Fisheries Service (NMFS) has identified EFH 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. Table 1 provides a list of the species that NMFS manages under the federally implemented Fishery Management Plans in the vicinity of the proposed action.

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

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*

5.5 Cultural Resources. In accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and its implementing regulations at 36 CFR 800, the U.S. Army Corps of Engineers (Corps) must consider the potential effects of this project on *historic properties* (cultural resource sites potentially eligible for or listed on the National Register of Historic Places). In addition, the Corps must afford the State Historic Preservation Officer (SHPO) and interested parties including but not limited to Native American Tribes (Tribes), the opportunity to comment on its determination of effects to *historic properties*. In order to asses the effects of the project, the Corps will conduct a records and literature search of the state wide survey and site files at the Mississippi Department of Archives and History, as well as other data as available, in order to identify existing resources. The search will include all areas of potential effect (APE) of the proposed project including staging areas, disposal areas, etc. Previously identified *historic properties* will be avoided by the project. In addition, should areas of high archaeological potential be located within the project APE, intensive archaeological survey will be conducted.

The results of the background research and any intensive survey will be coordinated with the SHPO, Tribes, and interested parties. Should *historic properties* be identified, avoidance will be the preferred resolution of effect method. Based on the proposed studies and *historic property* avoidance, the Corps has determined that the action should have no effect on historic properties in accordance with 36 CFR 800.4(d)(1). Therefore, the project is expected to have no significant impact to cultural resources.

Should unavoidable *historic properties* be found within the project APE, or previously undiscovered sites be located, or consultation with the SHPO or Tribe reveal unknown resources or Traditional Cultural Properties, further consultation and evaluation may become necessary. Should potential adverse effects be found, a Memorandum of Agreement may be necessary in order to resolve those effects to *historic properties*. In addition, the Advisory Council on Historic Preservation shall be notified and invited to participate as per 36 CFR 800.6(a)(1).

5.6 Aesthetics. The project area is aesthetically pleasing outside of the developed areas. The developed industrialized areas offer little in the way of aesthetics. Many of the remaining natural communities now have non-recoverable debris and non-recoverable, salvageable debris located in them.

5.7 Noise. The predominant ambient sounds in the vicinity of the project are those expected with metropolitan areas, including those associated with industry, ports, and local traffic (automobiles, boats, and planes).

5.8 Air Quality. Jackson County is in attainment with the National Ambient Air Quality Standards (NAAQS) of the Clean Air Act.

5.9 Threatened and/or Endangered Species. Table 2 provides a list of endangered and threatened species identified by the U.S. Fish and Wildlife Service (USFWS) in Jackson County, Mississippi.

Table 2

Federally Listed Endangered and Threatened Species in Jackson County, Mississippi (USFWS 2010)
E – Red-cockaded woodpecker (*Picoides borealis*)
E – Alabama Red Bellied Turtle (*Psuedemys alabamensis*)
TCH – Piping plover (*Charadrius melodus*)
E – West Indian Manatee (*Trichechus manatus*)
T – Yellow-blotched map turtle (*Graptemys flavimaculata*)
T – Gopher tortoise (*Gopherus polyphemus*)
T – Louisiana black bear (*Ursus a. luteolus*)
E – Mississippi gopher frog (proposal under review)
T – Loggerhead sea turtle (*Caretta caretta*)
E – Kemp's ridley sea turtle (*Lepidochelys kempii*)
T – Green sea turtle (*Chelonia mydas*) (P)
TCH – Gulf sturgeon (*Acipenser oxyrinchus desotoi*)
E – Louisiana quillwort (*Isoetes louisianensis*)
C – Black pine snake (*Pituophis melanoleucus* lodingi)
ECH- Mississippi Sandhill crane (*Grus canadensis pulla*)
T – Eastern indigo snake (*Drymarchon corais couperi*)
C - Pearl Darter (*Percina aurora*) (Pascagoula River System)
E – Leatherback Sea Turtle (*Dermochelys coriacea)*
Key to codes on list: E – Endangered T – Threatened C – Candidate Species TCH – Threatened with Critical Habitat

Of these species listed, most are not likely to be found within the project area; however, the potential exists for the occurrence of the Piping Plover. However, the project site is not within a designated Piping Plover Critical Habitat Unit, but some surveys in the past have possibly found Piping Plover in the vicinity. The piping plover breeds on sandy or pebble coastal beaches of Newfoundland and southeastern Quebec to North Carolina. Decline in piping plover populations has been linked to loss of breeding habitat. Shoreline development, river flow alteration, river channelization, and reservoir construction have all led to loss of breeding habitat. The piping plover winters along the Gulf coast but does not nest in Mississippi. The MSNHP database indicates three over-wintering sightings of piping plovers: one along the beaches of Gulfport, one on Deer Island, and one on Ship Island.

Piping plovers begin arriving on the wintering grounds in July, with some late-nesting birds arriving in September. Behavioral observations of piping plovers on the wintering grounds suggest that they spend the majority of their time foraging (Nicholls and Baldassarre 1990; Drake *et al*. 2001). Of the birds located on the United States wintering grounds during these two censuses, 89 percent were found on the Gulf Coast and 8 percent were found on the Atlantic Coast. The primary constituent elements for the piping plover wintering habitat are those habitat components that are essential for the primary biological needs of foraging, sheltering, and

roosting, and only those areas containing these primary constituent elements within the designated boundaries are considered critical habitat. The primary constituent elements are found in coastal areas that support intertidal beaches and flats (between annual low tide and annual high tide) and associated dune systems and flats above annual high tide.

6.0 ENVIRONMENTAL IMPACTS.

6.1 General. The impacts resulting from the placement of Class 2 riprap and establishment of vegetation would be short-term and localized, including temporary benthic impacts in the shallow water areas around operations, increased turbidity, suspension of bottom sediments, and minor aesthetic degradation. All reasonable efforts would be made to avoid, minimize, and restore affected natural resources to the extent practicable. It is anticipated implementation of this project would result in improved beach stability, improvements in floodwater conveyance and wildlife habitat.

6.2 Soils. The proposed action may result in minor soil disturbances due to placement of riprap and establishment of emergent tidal vegetation. No significant impacts are anticipated.

6.3 Biological Resources. Benthos within the immediate area may be destroyed. However, it is believed that affected areas are small and would rapidly recover within a couple of months back to pre-project conditions. No seagrasses or oyster beds would be disturbed. Turbidity levels would increase during some of the placement operations; however, the levels of turbidity would subside shortly after the operation is complete. No long-term adverse impacts are anticipated.

6.3.1 Coastal Flora. No flora would be disturbed as the project is located within a restored beach area that has no vegetation. No coastal flora is anticipated to be adversely impacted with this operation.

6.3.2 Coastal Fauna. The most vulnerable organisms during this action would be benthic animals, such as polychaete worms, shrimp, and crabs. These animals may be subject to localized impacts through breakwater placement activities, especially the less motile worms. The more motile species, such as fish, would not be significantly affected as they have the ability to avoid disturbances caused by the operations. Habitat would be improved for these species with the establishment of vegetation. No long-term adverse impacts are anticipated.

6.4 Essential Fish Habitat (EFH) Assessment. The Corps, Mobile District takes 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 riprap placement operations. These species are expected to recover rapidly soon after the operations are complete. As detailed in Section 4.3 of

this assessment, no significant long-term impacts to this resource are 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 placement activities. No change is anticipated to occur to the habitat types. Therefore, the Corps, Mobile District does not anticipate any adverse impacts to occur to EFH. The Corps, Mobile District received concurrence from the NMFS for the original project by electronic mail dated June 22, 2006.

6.5 Cultural Resources. The National Register of Historic Places has been consulted to determine if there are properties listed on, being nominated to, or that have been determined eligible for the National Register known to exist in the vicinity of the proposed work. As per requirements outlined in Section 106 of the National Historic Preservation Act, the Mobile District must consider the effects of the proposed action on historic properties. This project does not include removal of previously undisturbed or previously un-dredged water bottoms or shoreline. Therefore, no historic vessels are within the potential project prism and no vessel removal is anticipated as part of this project. The proposed project modification to the original project does not propose to exceed the existing footprint of the project. As part of the original assessment, the Mobile District has determined no historic properties affected by the proposed Pascagoula Beach Boulevard Restoration project as per 36 CFR 800.4(d)(1). Concurrence with our determination was received by Mississippi Department of Archives and History by letter dated July 7, 2006. Additionally, if human remains and funerary objects are inadvertently discovered, work in the immediate area would cease and the discovery would be protected. The Corps, Mobile District, the Mississippi State Archaeologist or Mississippi State Historic Preservation Office (SHPO) would be notified immediately by the Corps, Mobile District.

6.6 Aesthetics. The proposed action would result in only minor changes to existing conditions as the proposed project would place riprap and establish emergent tidal marsh vegetation. Aesthetics during construction would only be temporarily impacted, and the establishment of an emergent tidal marsh, and possibly later, dune vegetation, stands to improve the current blank-aesthetic quality of the beach. The establishment of the vegetation would eventually block the view of the riprap seaward.

6.7 Noise. Construction equipment and vehicles in the area would temporarily increase noise levels in the vicinity. No long-term adverse effects are anticipated.

6.8 Air Quality. The proposed project is expected to add exhaust emissions to the immediate area during construction, but this would not result in any permanent changes to the air quality of the area.

6.9 Threatened and Endangered Species. The proposed project is being coordinated with the USFWS to determine if any endangered or threatened plant or animal species would be adversely affected by the proposed project. Based on reviews, the Corps, Mobile District determined that no endangered or threatened plant or animal species would be adversely affected by the proposed

action. Should any endangered or threatened plant or animal species exist within the project area, the USFWS would be contacted to re-initiate consultation in accordance with the Endangered Species Act. The Corps, Mobile District received concurrence from the USFWS with our determination of may affect, but not likely to adversely effect any listed threatened and/or endangered species and their associated critical habitat by letter dated July 20, 2007 for the entire MsCIP program. A concurrence for a Modification for the Pascagoula Beach Boulevard Restoration Project was last issued October 6, 2008. Concurrence for the new modifications to the project is being requested from the USFWS.

7.0 COASTAL ZONE CONSISTENCY.

The State of Mississippi, Department of Marine Resources (MDMR) has been notified of this proposed action. The original portion of the project was reviewed by MDMR under the MsCIP Interim Report and after their review they concurred all the projects are consistent with the approved Mississippi Coastal Program (MCP) in the letter dated June 28, 2006. A Modification to the CZC for the Pascagoula Beach Boulevard Restoration Project was last issued February 6, 2009 (DMR-060871). Concurrence for the new modifications to the project is being requested from the MDMR.

8.0 WATER QUALITY CERTIFICATION.

The State of Mississippi, Department of Environmental Quality, Office of Pollution Control (MDEQ-OPC) has been notified of this proposed action. The Mississippi Department of Environmental Quality (MDEQ) originally issued a Water Quality Certification (WQC) under the MsCIP Project on August 27, 2007 (WQC No. 2007075). A Modification to the WQC for the Pascagoula Beach Boulevard Restoration Project was last issued March 25, 2009. Concurrence for the new modifications to the project is being requested from the MDEQ.

9.0 PROTECTION OF CHILDREN.

The EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), recognizes a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children's bodily systems are not fully developed; because children eat, drink, and breathe more in proportion to their body weight; because their behavior patterns may make them more susceptible to accidents. Based on these factors, the President directed each Federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. The President also directed each Federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. The project area is not a site frequented by children; there are no schools, parks, or playgrounds in the general project vicinity. There are no likely environmental health risks anticipated to children as a result of this project.

10.0 ENVIRONMENTAL JUSTICE.

On February 11, 1994, the President issued EO 12898, Federal actions to address *Environmental Justice in Minority Populations and Low Income Populations*. The EO focuses Federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The EO directs the Federal agencies to develop Environmental Justice strategies to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority and low-income populations. The proposed action poses no disproportionately high and/or adverse environmental and human health conditions on minority and low-income populations in the vicinity of the project.

11.0 CUMULATIVE EFFECTS SUMMARY.

Cumulative impacts are those impacts on the environment that result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions. This section analyzes the proposed actions as well as any connected, cumulative, and similar existing and potential actions occurring in the area surrounding the site. The potential adverse direct environmental and socioeconomic impacts associated with the proposed action are insignificant. In general, the proposed breakwater placement and vegetation establishment operations would have no significant adverse cumulative effects.

Based on the above discussion of the minor impacts, which would result from the implementation of the proposed project and due to the lack of long term adverse impacts, it is our belief that no significant cumulative impacts as a result of the riprap placement and vegetation establishment operations would occur.

12.0 CONCLUSION.

The proposed action would have no significant environmental impacts on the existing environment. No mitigation actions are required for the proposed project. Best Management Practices would be employed during the proposed actions to minimize any identified adverse impacts. 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.

13.0. LIST OF PREPARERS.

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14.0. LIST OF AGENCIES AND OTHERS CONTACTED REGARDING THE ACTION.

U.S. Environmental Protection Agency, Region 4
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Department of Commerce, National Marine Fisheries Service
Gulf of Mexico Fishery Management Council
Regional Director, National Parks Service
Commander, Eighth Coast Guard District
Mississippi Department of Environmental Quality
Mississippi Department of Marine Resources
Mississippi State Historic Preservation Officer
Mississippi Secretary of State

15.0. REFERENCES.

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