UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

January 10, 2001

FINDING OF NO SIGNIFICANT IMPACT

To All Interested Agencies and Public Groups:

In accordance with the environmental review guidelines of the Council on Environmental Quality at 40 Code of Federal Regulations (CFR) Part 1500, and the implementing regulations at 40 CFR Part 6 entitled "Procedures for Implementing the Requirements of the Council on Environmental Quality on the National Environmental Policy Act," the U. S. Environmental Protection Agency (EPA) has performed an Supplement to the Environmental Assessment (EA) for Isles Dernieres Barrier Island of the following proposed action under the authority of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) of November 1990, House Document 646, 101st Congress (Public Law 101-646).

Project Name: New Cut Dune/Marsh Restoration Project (TE-11a/TE-37), Terrebonne Parish, Louisiana

Sponsors: U. S. Environmental Protection Agency, Region 6
Louisiana Department of Natural Resources (LDNR)

Background: The EPA prepared an EA in December1993 and issued a Statement of Findings (SOF) on September 9, 1997, for the restoration of Isles Dernieres which included Racoon Island, Whiskey Island, Trinity Island and East Island.

Proposed Action: The propose New Cut Dune/Marsh Restoration would close the breach between (including any tidal cut) between Trinity Island and East Island through the direct creation of 68 acres of dune platform and 171 acres of marsh habitat platform. The project would also lengthen the structural integrity of the eastern Isles Dernieres by 282 acres through restoration of the littoral drift and addition of sediment into the nearshore system. The project area is located at 29°03'60" north latitude and 90°40'00" west longitude, within Section 119 of Township 22 South, Range 18 East. It is bordered by Lake Pelto to the north, Trinity Island to the west, East Island to the east, and the Gulf of Mexico to the south.

The proposed project would include creation of a 150' sacrificial beach with an elevation of +2' NAVD (North American Vertical Datum of 1998) built on the gulf side. The dune would match up with the dunes on East and Trinity islands and would have an elevation of +8' NAVD with a top width of 300' and side slopes of 1 to 15. The marsh platform would have a width of approximately 850' with elevations of +4' NAVD at the dune, and slope back to +2' NAVD on the bay side. Approximately 2.4 million cubic yards of dredge material would be used in this project. A hydraulic dredge would be used to mine sediments from the bay side north of New Cut and/or east of East Island (borrow areas #1 and #2). Sand fencing will be installed to maintain pumped sediment within the project area, and create dune habitats.

CWPPRA provides Federal funds for planning and implementing projects that create, protect, restore and enhance wetlands in coastal Louisiana. Under CWPPRA, the project cost must be shared between the Federal sponsoring agency and the State of Louisiana. Pursuant to approval of the Louisiana Coastal Wetlands Conservation Plan, the Federal government would provide 85% of the project cost and the Louisiana Department of Natural Resources (LDNR) would provide the remaining 15% non-Federal share. The U.S. EPA, Region 6, is the Federal sponsor of the proposed New Cut Dune/Marsh Restoration Project which was approved by the CWPPRA Task Force for Phase I funding on January 11, 2000, and is included on the CWPPRA Ninth Priority Project List. The estimated amount for the New Cut Dune/Marsh Restoration Project, Phases I and II, is $9,183,141. If Phase II is authorized by the Task Force, the estimated State/Federal match for this project would require LDNR to contribute a maximum of $1,379,435 (15%) and EPA to contribute a maximum of $7,803,706 (85%). The maximum amount authorized for Phase I of this Project is $926,637. The estimated Phase II amount is $8,256,504.

The proposed project is part of and consistent with the Louisiana Coastal Wetlands Conservation and Restoration Task Force, and the Wetlands Conservation and Restoration Authority, *Coast 2050: Toward a Sustainable Coastal Louisiana,* (1998) Region 3 ecosystem strategy to restore barrier islands and gulf shorelines. Construction of the recommended action proposed in this Supplement to the EA may be authorized as soon as compliance with the appropriate environmental laws and regulations is achieved and the project plans and specifications are complete.

Finding. On the basis of the Supplement to the EA for Isles Dernieres Barrier Island, and the EA/SOF for Isles Dernieres, the EPA has determined that the proposed New Cut Dune/Marsh Restoration Project is not a major Federal action significantly adversely affecting the quality of the human environment, and that the preparation of an Environmental Impact Statement (EIS) is not warranted. Comments regarding this preliminary decision not to prepare an EIS may be submitted to the U.S. Environmental Protection Agency, Office of Planning and Coordination (6EN-XP), 1445 Ross Avenue, Dallas, Texas 75202-2733.

This preliminary Finding of No Significant Impact (FNSI) will become final after the 30-day comment period expires if no new information is provided to alter this finding. No administrative action will be taken on this decision during the 30-day comment period. Copies of the EA and requests for review of the Administrative Record containing the information supporting this decision may be requested in writing at the above address, or by telephone at (214) 665-2258.

Responsible Official,

Gregg A. Cooke
Regional Administrator

NEW CUT DUNE/MARSH RESTORATION
(TE-11A/TE-37)
TERREBONNE PARISH, LOUISIANA
SUPPLEMENT
to the
ENVIRONMENTAL ASSESSMENT
for
ISLES DERNIERES BARRIER ISLAND RESTORATION AND COASTAL WETLAND CREATION

Coastal Wetlands Planning, Protection and Restoration Act
Priority Project List 9

Sponsored by the
U. S. Environmental Protection Agency Region 6
and the
Louisiana Department of Natural Resources

December 2000

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Summary of Environmental Assessment

Project Name:	New Cut Dune/Marsh Restoration Project (TE-11a/TE-37)
Location:	Terrebonne Parish, Louisiana (29□03'60" North; 90□40'00" West, within Section 119 of Township 22 South, Range 18 East)
Sponsors: Federal	U. S. Environmental Protection Agency, Region 6
Non-Federal	Louisiana Department of Natural Resources (LDNR)
Background:	The U.S. Environmental Protection Agency (EPA) prepared an Environmental Assessment (EA) in December1993 and issued a Statement of Findings (SOF) on September 9, 1997, for the restoration of Isles Dernieres, which included Racoon Island, Whiskey Island, Trinity Island and East Island.
Recommended Plan:	The proposed plan would close the breach between Trinity Island and East Island through the direct creation of beach, dune and marsh habitat. This project would also restore the structural integrity of the eastern Isles Dernieres through restoration of the littoral drift system and addition of sediment into the nearshore environment.
Project Purpose:	Fill in the gap (including any tidal cut) between Trinity and East islands and enhance the structural integrity of the eastern Isles Derniers.
Alternatives:	No Action Proposed Project
Landrights:	The entire project area is owned by the State of Louisiana pursuant to that certain Agreement by and between Louisiana Land and Exploration Company (LL&E) and the State of Louisiana, dated July 24, 1997, whereby LL&E donated the entire Isles Dernieres chain to the State. The Louisiana Department of Wildlife and Fisheries is the state agency responsible for stewardship.
Project Benefits:	Benefits for this project would be the creation of approximately 239 acres of dune and marsh habitat with dredged material. Also, this project would benefit approximately 282 acres of habitat with the resultant enhancement of the structural integrity of the eastern Isles Dernieres. Increased acreage will benefit birds and will increase potential nesting habitat.
Potential Adverse Impacts:	Dredging at borrow areas would temporarily disturb bottom habitat and permanently remove sediment (the area dredged would eventually fill in naturally in a short period of time.); deposition of the material in New Cut would replace bottom habitat with beach, dune and marsh habitat. Construction activities would cause minor and temporary disturbance to adjacent wetlands, oyster leases, wildlife use, recreation use, and, water and air quality. No other adverse effects are anticipated.

1.0 INTRODUCTION

Title III of Public Law 101-646, the "Coastal Wetlands Planning, Protection and Restoration Act" (CWPPRA), established the Louisiana Coastal Wetlands Conservation and Restoration Task Force comprised of five Federal agencies and the State of Louisiana. The Federal agencies involved are the U.S. Natural Resources Conservation Service (NRCS), the U.S. Army Corps of Engineers (COE), U.S. National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (FWS), and the U.S. Environmental Protection Agency (EPA). The Governor represents the State of Louisiana, with the Louisiana Department of Natural Resources (LDNR) providing the primary source of the non-Federal share of funding. Isles Dernieres Phase 0 (TE-20) and Phase I (TE-24), Whiskey Island, and the proposed New Cut Dune/Marsh Restoration Projects were included on CWPPRA Priority Project List's 1, 2, 3, and 9, respectively.

The EPA prepared an Environmental Assessment (EA) in December1993 for review for the restoration of Isles Dernieres. The EA included (from west to east) Raccoon Island, Whiskey Island, Trinity Island and East Island (Figure 1-1). The Finding of No Significant Impact (FNSI) was issued by EPA without any comment objecting to the project. However, construction was placed on hold in 1994 until controversy over land and mineral rights were resolved. The Statement of Findings (SOF) was issued on September 9, 1997, and dredging and re-vegetation on East and Trinity islands were completed in September 1998, and May 1999, respectively. In August 1997, a Supplement to the EA was prepared by EPA for Whiskey Island. There were three comment letters received with no objections to the EA; a SOF was issued on November 6, 1997. Dredging and final re-vegetation on Whiskey Island were completed in July 1998, and May 1999, respectively.

This document is a Supplement to the Isles Dernieres Barrier Island EA for the proposed New Cut Dune/Marsh Restoration Project which was approved for Phase I funding by the CWPPRA Task Force on January 11, 2000, and included on the CWPPRA Ninth Priority Project List. The project is in Terrebonne Parish, Louisiana, located at 29°03'60" north latitude and 90° 40'00" west longitude, within Section 119 of Township 22 South, Range 18 East. The project area is bordered by Lake Pelto to the north, Trinity Island to the west, East Island to the east, and the Gulf of Mexico to the south (Figure 1-2).

2.0 PURPOSE AND NEED FOR ACTION

The propose New Cut Dune/Marsh Restoration Project would close the breach (including any tidal cut) between Trinity Island and East Island through the creation of 68 acres of dune platform and 171 acres of marsh habitat platform. The project would also lengthen the structural integrity of eastern Isles Dernieres by approximately 282 acres through restoration of the littoral drift and addition of sediment to the nearshore environment.

New Cut was formed in 1974 when the eastern end of Trinity Island was breached during Hurricane Carmen. This breach was further exacerbated and widened by Hurricanes Juan in 1985 and Andrew in 1992. The Isles Dernieres shoreline is one of the most rapidly deteriorating barrier shorelines in the U.S. This barrier system is exhibiting a pattern of fragmentation and

disintegration, and with regard to longshore sediment transport systems, the islands have become sources of sediment with continual loss in sediment volume.

The bays, estuaries, and wetlands behind the Isles Dernieres are critical habitat for one of the most productive commercial fisheries, as well as habitat of continental importance for North American waterfowl populations. The barrier islands act as buffers for this habitat, absorbing much of the wave action and storm surges, and reducing the tidal prism from the Gulf of Mexico. Loss of the barrier islands would expose large areas of the valuable estuaries and marshes to the intrusion of saltwater and the elements of the gulf. The loss would effectively result in the convertion of the bays to open gulf waters with entirely different habitats supporting different fish and wildlife populations, and result in severe impact to important coastal infrastructure, fish, and wildlife resources.

The project as proposed is consistent with the 1998 Coast 2050 Plan[1], Region 3 ecosystem strategy to restore barrier islands and gulf shorelines. Much work has been done to address the problem as Louisiana and its parishes continue to plan and undertake coastal wetlands restoration work. The goal is to reduce erosion, preserve or enhance ecology, and close minor island breaches.

3.0 AFFECTED ENVIRONMENT

3.1 Climate. The climate along the Louisiana coast is humid, subtropical with a strong maritime character. It is influenced to a large degree by the waters of the Gulf of Mexico. Prevailing wind is from the south at an average speed of 11 miles. The wings off the gulf reduce extreme summer heat, shorten the duration of infrequent winter polar air masses, and provide abundant rain in all seasons. The average rainfall is 65.7 inches per year with 60 percent of the rain occurring between April and September. Thunderstorms occur on about 74 days each year, mostly in summer. The average temperature in the winter is 52□ Fahrenheit (F) with an average daily minimum of 42□ F. The average temperature in the summer is 81□ F and the average daily maximum is 89□ F. Hurricanes and tropical storms can have a major effect on barrier island morphology. For the study area the annual frequency of landfall of tropical storms is 0.17 storms/yr/100 nautical miles, or about 1 storm in 6 years for a shoreline the length of Isles Dernieres. About one half of these tropical storms are hurricane strength.

3.2 Wetland Loss. According to the Coast 2050 Plan, this project lies within the Isles Dernieres Shorelines unit of Region 3. Shoreline erosion rates on the Isles Dernieres have historically averaged 32.8 - 49.2 ft/yr. Subsidence is occurring at an estimated rate of 2.1 - 3.5-ft/century. Following the passage of Hurricane Andrew just to the west of the Isles Dernieres in 1992, Raccoon Island lost 30% - 40% of its area and shoreline erosion along stretches of Trinity Island exceeded 131.2 feet. Approximately 495 acres of land were lost in this unit from 1978-1990.

[1] Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1998. *Coast 2050: Toward a Sustainable Coastal Louisiana*. Louisiana Department of Natural Resources. Baton Rouge, LA.

Research conducted in 1999 prior to restoration activities on East and Trinity islands indicated that none of the Isles Dernieres were expected to exist by the year 2050. The reports predicted that the Isles Dernieres chain would be under water by the year 2007.

3.3 Vegetation. The marsh creation area is currently open shallow water with subaqueous sandbars. Vegetation adjacent to the project area on East and Trinity islands is classified as saline marsh. From observations made by the CWPPRA Environmental Work Group, vegetation on East Island included *Spartina alterniflora* on the bay side of the island, and *Spartina patens* and *Panicum amarum* on the constructed dune. Vegetation sampling conducted by LDNR as part of the CWPPRA monitoring of East and Trinity islands found planted species such as *Spartina alterniflora*, *Cynodon dactylon*, *Panicum amarum*, and *Spartina patens,* as well as *Sesuvium portulacastrum*, *Lolium perrenne*, and *Sueda linearis* (Table 1).

3.4 Salinity. Data used by the CWPPRA Wetlands Valuation Assessment indicated an annual salinity of 22 ppt for this area.

3.5 Soils. Beach, dune and overwash soils are sandy, while saline marshes are typically clays and mucky clays.

3.6 Wildlife and Fisheries. The emergent wetlands and open water in the project area provide important food, cover, nesting, and resting habitat for a multitude of fish and wildlife species. A wading bird nesting colony was documented prior to 1990 in the vicinity of the project area. According to the Louisiana Department of Wildlife and Fisheries (LDWF), no such colonies have been documented in the area since then. The seabird populations in open water habitats are projected to remain stable.

Mammals that utilize the area include raccoons (*Procyon lotor*), muskrats (*Ondatra zibethicus*), nutria (*Myocastor coypus*), mink (*Mustela vison*), and river otter (*Lutra canadensis*). These mammals are not historically present in open waters for Isles Dernieres Shorelines mapping unit. The Atlantic bottlenose dolphin (*Tursiops truncatus*) is the only marine mammal in nearshore gulf waters.

Marshes of the Coast 2050 Isle Derniers Shorelines mapping unit support populations of marine fisheries resources. Characteristic species include but are not limited to red drum (*Sciaenops ocellatus*), black drum (*Pogonias cromis*), Spotted seatrout (*Cynoscion nabulosus*), Spanish mackerel (*Scombermorus maculatus*), Gulf menhaden (*Brevoortia patronus*), southern flounder (*Paraichthys lethostigma*), white shrimp (*Penaeus setiferus*), brown shrimp (*Penaeus aztecus*), blue crab (*Callinectes sapidus*), and American oyster (*Crassostrea virginica*). These species utilize project area aquatic resources primarily as nursery, foraging, and predator refugia habitat. Only the Spanish mackerel (*Scombermorus maculatus*) is believed to be increasing in abundance in this unit while the other species listed above are decreasing.

There are oyster leases in the vicinity of the project. Numerous oyster leases are located in the northwest area of borrow area #1; no oyster leases are located in borrow area #2. An

oyster assessment was conducted for the project site, but did not include the borrow areas. It was determined that (1) there are "no oyster leases located in the primary zone," the most likely area where an oyster lease would be destroyed or severely impacted from project activities, and that (2) "there are three oyster leases" in the secondary zone which may be impacted by sediment transport during and after construction activities. The secondary zone encompasses a radius of approximately 2,600 feet out from the back side of the island.

3.7 Threatened and Endangered Species. The Isles Dernieres provide critical habitat for the threatened brown pelican (*Pelecanus occidentalis*). Specifically, brown pelicans are currently known to nest on Raccoon Point on Isles Dernieres, Queen Bess Island, Plover Island (near Baptiste Collette Bayou), and islands in the Chandeleur chain and St. Bernard Parish. The brown pelican population is expected to increase since the trend over the last 10-20 years has been on the increase. No brown pelican nesting sites are known to occur in the proposed project area. Brown pelicans feed in shallow estuarine waters, using sand pits and offshore sand bars as rest and roost areas. Major threats to this species include chemical pollutants, colony site erosion, disease, and human disturbance.

Endangered and threatened sea turtles forage in the nearshore waters, bays and sounds of Louisiana.

The threatened piping plover (*Charadrius melodus*) winters in coastal Louisiana and occurs in the vicinity of the proposed project. Piping plovers may be present in Louisiana for 8 to 10 months, arriving from the breeding grounds as early as late July and remaining until late March or April. Piping plovers feed extensively on intertidal beaches, mudflats, sandflats, algal flats, and wash-over passes with no or very sparse emergent vegetation and require unvegetated or sparsely vegetated areas for roosting. Roosting areas may have debris, detritus, or microtopographic relief offering refuge to plovers from high winds and cold weather. In most areas, wintering piping plovers are dependant on a mosaic of sites distributed throughout the landscape, as the suitability of a particular site for foraging or roosting is dependent on local weather and tidal conditions. Plovers may move among sites as environmental conditions change. Major threats to this species include the loss and degradation of habitat due to development, disturbance by humans and pets, and predation. On July 7, 2000, the FWS published a proposed rule in the Federal Register proposing critical habitat for wintering piping plovers in Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. A survey during the winter of 1991-92 found no piping plovers on East Island and 129 were seen on Raccoon Island.

3.8 Cultural Resources. According to the Louisiana Office of Cultural Development, Division of Archaeology, there are no archaeological sites or historic standing structures either listed on or determined eligible for listing on the National Register of Historic Places located within the project area. Additionally, there are no other known cultural resources within the project area.

3.9 Recreation. The Isles Dernieres have immense recreational value due to their unique location between the gulf and marsh. Fishing and hunting are the primary recreation activities

near Cocodrie and Isles Dernieres. Recreationists make use of the beaches, picnic, hike, and camp overnight. Camp sites used to be leased on a yearly basis through the Louisiana Land and Exploration Company. Prior to Hurricane Andrew, there were numerous camps located on Isles Dernieres, particularly on Trinity Island. Currently no additional leases are planned. There are no permanent residents on Isles Dernieres. Cocodrie, about fifteen miles to the north, is the nearest community.

3.10 Infrastructure. There is substantial oil and natural gas activity in the islands and especially in Terrebonne Bay behind the islands. Trinity Island in particular has been negatively impacted by oil and natural gas access canals that were dredged on the island. These canals serve as potential weak spots, or focal points, for breaches to form during severe storm and overwash events. The Isles Dernieres Shorelines has 11 oil and/or natural gas wells and no roads.

4.0 PROPOSED ACTION AND ALTERNATIVES

4.1 Proposed Action. The proposed New Cut Dune/Marsh Restoration Project to close the breach between East Island and Trinity Island and restore the structural integrity of the eastern Isles Dernieres (Figure 4-1) is consistent with the 1998 Coast 2050 Plan, Region 3 ecosystem strategy to restore barrier islands and gulf shorelines. Specifically, the proposed project would include creation of a 150' sacrificial beach with an elevation of +2' NAVD built on the gulf side. The dune would match up with the dunes on East and Trinity islands and would have an elevation of +8' NAVD with a top width of 300' and side slopes of 1 to 15. The marsh platform would have a width of 700' with elevations of +4' NAVD at the dune and slope back to +2' NAVD on the bay side (Figure 4-2). Approximately 2.4 million cubic yards of dredge material would be used in this project. A hydraulic dredge would be used to mine sediments from borrow area #1 on the bay side north of New Cut, and borrow area #2 east of East Island (Figure 4-3). Sand fencing will be installed to maintain pumped sediment within the project area, and create dune habitats.

4.2 Alternatives. Two alternatives were considered. Alternative 1 is the no action alternative which involves leaving the breach between Trinity Island and East Island in its existing open-water state. Alternative 2 is the proposed plan to (1) close the breach through the direct creation of dune and marsh habitat, and (2) restore the structural integrity of the eastern Isles Dernieres through restoration of the littoral drift system and additions of sediment into the nearshore environment.

Alternative 1 would allow the erosion of the eastern end of Trinity Island and western end of East Island to continue resulting in ever decreasing volume of sediment. Alternative 2 would create approximately 239 acres of vegetated dune and marsh. It would also restore the structural integrity of the eastern Isles Dernieres through restoration of the littoral drift system and addition of sediment into the nearshore environment (282 acres). This alternative would result in a reduction in the future land loss rate and the protection of an estimated 594 acres of habitat from loss over the 20-year project life.

4.3 Conclusion. This Supplement to the EA for Isles Dernieres Barrier Island for the New Cut Dune/Marsh Restoration Project (TE-11a/TE-37) is based on a comprehensive review of relevant literature including the December 1993, EA prepared for Isles Dernieres Barrier Island Phase 0 (TE-20/XTE41) and Phase 1 (TE-24), site-specific data, and project engineering and environmental reports. This supplemental EA concludes that there are no significant adverse environmental impacts anticipated by the implementation of the wetland restoration project. This finding supports the recommendations of the CWPPRA Task Force, the EPA and LDNR. The long-term protection and enhancement of the project area is expected to be beneficial to wetlands, fisheries, wildlife, recreational, and cultural resources as well as restoration of natural structural framework of the Terrebonne-Barataria estuary and the coast of Louisiana.

5.0 ENVIRONMENTAL IMPACTS AND MITIGATION

The resources described in this section are those recognized by applicable laws, executive orders, regulations, or other standards of National, State or regional agencies and organizations. Resources that might be impacted by the alternatives in the EA include fish and wildlife resources, essential fish habitat (EFH), threatened and endangered species, wetlands, water quality, air quality, cultural resources, and recreational resources.

5.1 Fish and Wildlife Resources.

Existing Conditions. The emergent wetlands and associated open water habitat in the vicinity of proposed project support generally decreasing populations of finfish, shellfish, birds, reptiles and mammals, as only the Spanish mackerel (*Scombermorus maculatus*) is believed to be increasing, as indicated above. These areas of open water and marsh are a valuable nursery and food source for many commercial and/or recreational species of finfish and shellfish. Project area wetlands also provide wildlife food, cover, nesting and resting habitat.

Alternative 1 - No Action. With continuing loss of saline marsh, shoreline, and shallow open water habitat, fish and wildlife populations, specifically southern flounder, black drum, brown shrimp, American oyster, seabirds, shorebirds, waterfowl, and raptors, in the area would likely decline. While loss of vegetation reduces the quality of marsh as habitat for terrestrial and semi-aquatic wildlife, a short-term increase in the value of the area as a nursery and associated food source for finfish and shellfish would result. However, continued land loss leads to increasing water depth and the value of the area as a food source and nursery declines further.

Alternative 2 - New Cut. This alternative would provide for the protection of existing marsh and associated shallow open water habitat through filling in the breach between East and Trinity islands, creation of approximately 239 acres of vegetated wetlands, and a reduction in the future proposed land loss rate. As project area marshes are protected and enhanced, the habitat value for associated fish and wildlife species will increase, and be present (or exist) for a longer period of time.

A survey for bird nesting as well as wintering Piping plover would be conducted in coordination with the LDWF and FWS prior to project construction (planned to begin in April or May, 2001, and be completed within 90 days). A provision of the Clean Water Act, Section 404 permit, would be that if bird nesting or Piping plover use are documented, construction activities within 1,500 feet of the site would be coordinated with LDWF, FWS, LDNR, EPA, and all contractors would be required to minimize habitat disturbance.

5.2 Oyster Leases.

Existing Conditions. Numerous oyster leases are located in the northwest area of borrow Area 1 (Figure 5-1). There are no oyster leases located in borrow Area 2. There are some leases in the vicinity of the project.

Alternative 1 - No Action. The no action alternative would have no impact on present oyster leases. However, further erosion of the islands and continued breaching may cause overwashed sediment to be deposited on the existing oyster beds as well as increased difficulty in fishing these areas due to increased wave energies.

Alternative 2 - New Cut. This alternative would have no long-term adverse impact on present conditions and may contribute to long-term viability of oyster beds behind the islands through protection from the elements of the gulf and sediment deposition during overwash events. A provision of the Clean Water Act, Section 404 permit would limit dredging operations to 0.5 miles from the leases due to possible impact to oyster beds. Also, silt screens or other methods of preventing sediment from impacting oyster leases will be utilized during construction.

5.3 Essential Fish Habitat (EFH).

Existing Conditions. Project evaluation included examination of habitat considered to be essential for fisheries as established under the provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). The proposed project is located in an area identified as EFH for red drum (*Sciaenops ocellatus*), Spanish Mackerel (*Scombermorus maculatus*), white shrimp *(Penaeus setiferus*), brown shrimp (*Penaeus aztecus*), bluefish (*Pomatomus saltatrix*). Federally managed fisheries and their EFH are identified in the 1998 generic amendment of the Fishery Management Plans for the Gulf of Mexico prepared by the Gulf of Mexico Fishery Management Council (GMFMC). The 1998 generic amendment was prepared as required by the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 94-265).

Alternative 1 - No Action. Without action, continuing direct loss of marsh (estuarine habitat), shoreline, and shallow open water habitat would compromise EFH, potentially contributing to declines in commercial nursery habitat and/or recreational fisheries species of concern.

Alternative 2 - New Cut. This alternative would provide for the protection of existing marsh and associated shallow open water habitat through filling in the breach between Trinity Island and

East Island, creation of approximately 239 acres of vegetated wetlands, and a reduction in the future proposed land loss rate. Protection and enhancement of project marsh and shallow open water areas will increase the habitat value for associated fisheries species and keep that habitat value present for a longer period of time than without the project. Protection of the resource base should satisfy the objective of essential fish habitat pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. Submittal of the EA is provided to initiate Federal consultation requirements pertaining to EFH under the Magnuson-Stevens Fishery Conservation and Management Act. The preliminary finding is that the proposed project will have no significant adverse impacts on EFH.

5.4 Threatened and Endangered Species.

Existing Conditions. According to the FWS, the threatened brown pelican, the threatened piping plover, and several species of sea turtles may occur in the vicinity of the proposed project.

Alternative 1 - No Action. Without implementation of the proposed project, existing potential habitat would continue to be lost for available use by the brown pelican and piping plover.

Alternative 2 - New Cut. Implementation of the proposed project is not likely to adversely impact the brown pelican or the piping plover, and would likely increase longevity and enhance the quantity and quality of the available habitat for these species. This would occur through filling in the breach between East Island and Trinity Islands and preventing direct land loss, protecting existing shallow estuarine water habitat, and creating 239 acres of dune and marsh along with providing enhancement of approximately 282 acres of these habitats in the Isle Derniers system.

5.5 Wetlands.

Existing Conditions. For the Isles Dernieres Shorelines mapping unit, the area is comprised of approximately 78 percent open water and 17 percent of saline marsh and barrier beach; the remainder consisting of hardwood forest. Within the project boundary, wetlands are classified as saline marsh with characteristic vegetation including *Spartina alterniflora* on the bay side of the island and *Spartina patens* and *Panicum amarum* on the constructed dune. Vegetation observed on Trinity Island included *Spartina alterniflora*, *Spartina patens*, and *Avicennia germinans* on the bay side of the island, *Spartina patens* and *Panicum amarum* on the constructed dune, and *Spartina patens* and *Batis maritima* on the Gulf side. Tropical storms and hurricanes have resulted in substantial beach erosion and overwash of these islands over the years.

Alternative 1- No Action. Without stabilization of the New Cut area through filling in the breach between East Island and Trinity Island, marsh would continue to be lost. Shoreline erosion is a significant cause of land loss in the Terrebonne Basin. Some of the nation's highest average erosion rates occur along the coastline of the Gulf of Mexico. The Coast 2050 Plan indicates from 1978 to 1990, about 495 acres of land in the Isles Dernieres Shorelines mapping unit were converted to open water. Current shoreline erosion rates in the project area for Wetland Value

Assessment purposes were estimated at approximately 39 feet per year. Research conducted prior to restoration conducted on East and Trinity Islands in 1999, it was expected that none of the Isles Dernieres will remain in 2050 if no action is taken. In fact, these reports predicted that, with no action, the Isles Dernieres chain may become sub-aqueous by 2007.

Alternative 2 - New Cut. With implementation of the project, approximately 239 additional acres of vegetated wetlands would be created. The erosion rate may be slowed, and the life of the wetlands should be increased.

5.6 Wine Island.

Existing Conditions. Wine Island is located northeast of borrow area #2 in the southern portion of Terrebonne Bay, west of Timbalier Island, east of Isles Denieres, southwest of the Houma Navigation Canal, approximately 30 miles southeast of Cocodrie, Louisiana,. Wine Island was destroyed by Hurricane Andrew, but the LDNR and the COE restored 28 acres of the island.

Alternative 1 - No Action. The no action alternative would have no impact on Wine Island.

Alternative 2 - New Cut. This alternative would have no long-term adverse impact on present conditions. However, the dredging operations may have temporary impacts on the coastline of Wine Island. To determine if the dredged area poses a threat to any adjacent coastline, the geotechnical contractor shall utilize a numerical wave model [spectral wave model (STWAVE)]. The results of the modeling, expected to be completed by December 8, 2000, will determined how deep the dredging of source material can go so as not to impact the island.

5.7 Water Quality.

Existing Conditions. The project area is located in the Terrebonne Basin at the saline/brackish end of the Terrebonne estuary. There is no fresh surface water on the islands. Isles Dernieres is in subsegment 1208 of the Terrebonne Basin. One of the standards that applies to this area is turbidity, 50 nephelometric turbidity units (NTU). This standard is usually associated with contact recreation (swimming). The coastal waters are naturally very turbid due to the considerable amount of suspended sediments derived from freshwater inflows and coastal erosion. The turbidity standard that applies to this area would probably be exceeded. The islands are 40 to 50 miles removed from significant sources of inland freshwater pollution such as fecal coliform bacteria. There are no water quality problems apparent.

Alternative 1 - No Action. The no action alternative could potentially contribute to an increase of turbidity in the Terrebonne estuary. These conditions could occur due to increased wave energies causing greater erosion and formation of erosive, high energy tidal surges connecting higher salinity waters of the Gulf of Mexico to interior bay waters.

Alternative 2 - New Cut. This alternative would have no long-term adverse impact on present conditions. However, temporary impacts due to increased turbidity from dredging in Lake Pelto

and placement of material in the breach between East Island and Trinity Island could occur during project construction. Also, it is not likely that swimming would be occurring within or near a construction site. It is expected that turbidity levels would return to normal shortly after construction ended. Long-term benefits may occur due to decreased likelihood of higher wave energies causing greater erosion around interior bay waters.

5.8 Air Quality.

Existing Conditions. There are no air quality monitoring stations in Terrebonne Parish, although existing air quality can be considered good. Except for minor boat traffic, there are no air pollution sources located on or near the Isles Dernieres. The closest major sources of air pollution are 60 or more miles away in the urban-industrial corridor from New Orleans to Baton Rouge.

Alternative 1 - No Action. The no action alternative would have no impact on present air quality conditions.

Alternative 2 - New Cut. This alternative would have no long-term adverse impact on present conditions. Minor temporary impacts due to emissions from dredging equipment could occur during project construction. It is expected that exhaust emissions from dredging equipment should be quickly dissipated by prevailing winds and be limited to the construction phase of the project.

5.9 Cultural Resources.

Existing Conditions. According to the Louisiana Office of Cultural Development, Division of Archaeology, there are no archaeological sites, historic standing structures, or other known cultural resources within the project area.

Alternative 1 - No Action. The no action alternative would have no impact on significant cultural resources.

Alternative 2 - New Cut. There are no known cultural or historic sites in the project area. This alternative would have no impact on significant cultural resources.

5.10 Recreational Resources.

Existing Conditions. Recreational activities associated with Cocodrie, which is the closest community about fifteen miles to the north, include fishing, making use of the beaches, picnicking, hiking, and camping overnight.

Alternative 1 - No Action. Future recreational use will decrease as beach erosion continues to destroy habitat and as wetland deterioration is exacerbated by increasing size of the breach,

leading to declines in fisheries, nursery, and wildlife habitat. Land and marsh loss would be accelerated by saltwater intrusion and shoreline erosion resulting from wave action.

Alternative 2 - New Cut. This alternative would beneficially affects recreational resources. Project components may provide for greater long-term productivity and viability of project area beach, dune, and marsh, thus contributing to the stability of fish and wildlife populations upon which recreational activities are based.

6.0 OTHER ENVIRONMENTAL CONSIDERATIONS

6.1 Socioeconomics and Environmental Justice. The project is located in open water and there are no residential areas withing the project area. Therefore, a basic Environmental Justice analysis was not performed.

6.2 Coastal Zone Management, Prime Farmlands and Floodplains.

Coastal Zone Management (CZM). The proposed project was approved for funding on January 11, 2000, by the CWPPRA Task Force. The EPA Region 6 and the LDNR are co-sponsors of the project. In order to comply with CZM requirements, the project will need a Coastal Use Permit (CUP) prior to construction, which is issued by the LDNR. Applications for the CUP and COE 404 permits have been submitted. A Joint Public Notice for both permits will be issued upon completion of this EA.

Floodplains. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps delineate the 100-year Special Flood Hazard Areas, designated "A" or "V" zones. A-zone Special Flood Hazard Areas are areas that have a 1 percent chance of experiencing a 100-year level flood in any given year. Coastal zone areas are designated "V" zones in which structures are subject to damage from both flooding and significant wave action. According to FEMA, the project area is intertidal, estuarine emergent marsh within the 100-year floodplain. However, there are no permanently inhabited areas within an approximate 15 mile radius of the project area.

Implementation of the proposed project proposal will not result in the construction or introduction of any structure that would impede, displace, retard or cause flood waters to backup.

Prime Farmland. The project site is located in the Terrebonne Basin. None of the project site has been used for cultivation and soils are not considered prime farmland. Also, the NRCS's Section 303(e) Overgrazing Determination indicated that overgrazing is not a problem in the project area; therefore, easements restricting grazing are not required.

6.3 Cumulative Impacts. Potential cumulative impacts would be the aggregate impacts to the environment resulting from the proposed action in combination with other ongoing actions, and actions being considered within the reasonably foreseeable future. The proposed action is part of

an effort under CWPPRA to create, protect, restore and enhance wetlands in coastal Louisiana. CWPPRA provides Federal funds for planning and implementing of such projects.

This project intent would fill in the breach between East Island and Trinity Island with material dredged from Lake Pelto, and will create approximately 239 aces of dune and marsh habitat; and, lengthen the structural integrity of the eastern Isles Dernieres through restoration of the littoral drift and addition of sediment into the nearshore system (282 acres). No significant adverse cumulative impacts are expected.

6.4 Unavoidable Adverse Effects. The primary unavoidable adverse effects are the immediate impacts from construction related sediment excavation and deposition on the non-mobile benthic organisms in the areas; and, minor and temporary disturbance to adjacent wetlands, water, and air quality. The effects on air quality and the noise generated by the proposed project will be of a temporary nature.

Because the project is a restoration action, the social and environmental benefits of the proposed project are considerably greater than the environmental impacts and irretrievable commitment of resources identified in this document. The proposed project will eliminate the identified risks of taking no action and would be beneficial to the approximately 171 acres of saline marsh, and would create approximately 239 acres of dune and marsh habitat with dredged material.

6.5 Relationship Between Local, Short-Term Use of the Environment and the Maintenance and Enhancement of Long-Term Beneficial Uses. In 1974, the eastern end of Trinity Island was breached during Hurricane Carmen. This breach was further exacerbated and widened by Hurricanes Juan in 1985 and Andrew in 1992. Due to the altered hydrologic and geomorphologic conditions of these barrier islands and an erosion problem from the gulf, there exists the potential for the formation of a wider breach. Significant water exchange occurs between Lake Pelto and the gulf through New Cut. Erosive forces of currents on these islands is continuing, and substantive erosion and marsh deterioration will continue. The intent of the recommended plan, to fill in the breach between East Island and Trinity Island, is to eliminate these erosive tidal forces between the islands.

6.6 Irreversible and Irretrievable Commitment of Resources. The irreversible and irretrievable commitment of resources would be labor, materials, wear on machinery, monies spent, and energy expended for implementation of the restoration action.

7.0 CONSULTATION AND PUBLIC PARTICIPATION

Coordination concerning the proposed project has been maintained with each of the CWPPRA Task Force agencies and the LDNR. Consultation with the FWS and LDWF, in accordance with the Endangered Species Act of 1973 and Fish and Wildlife Coordination Act, has been conducted. Consultation with the Louisiana Department of Culture, Recreation and Tourism in accordance with the National Historic Preservation Act of 1966, and Archaeological

and Historic Preservation Act of 1974, has also been conducted. Responses from the respective agencies with regard to the proposed action are included in Section 8.0.

The EA has been prepared in coordination with the NMFS in determining categories of EFH and associated fisheries species within the project vicinity. Submittal of the EA is provided to initiate formal Federal consultation requirements pertaining to EFH under the MSFCMA. Federal, State, and local agencies, as well as other interested stakeholders, will receive a copy of this EA.

U.S. Natural Resources Conservation Service
U.S. Army Corps of Engineers
U.S. National Marine Fisheries Service
U.S. Fish and Wildlife Service
Federal Emergency Management Agency
State Historic Preservation Officer
Louisiana Department of Environmental Quality
Louisiana Department of Natural Resources
Louisiana Department of Wildlife and Fisheries
National Audubon Society
Terrebonne Parish Consolidated Government
Burlington Resources (formerly LL&E)

Public involvement is achieved through the Citizen Participation Group and public meetings conducted during the project development and selection stages under CWPPRA, involving input from the public, and local, State, and Federal agencies. The project concept was originally proposed by the public at a nomination meeting held in 1999. An overview of the selected project was presented to the public in 1999.

The public's understanding of the functional values of coastal wetlands and awareness that wetland loss has significant, adverse consequences has risen to new levels in recent years. The public recognizes that the continued loss of coastal wetlands can ultimately result in the displacement of entire communities, the loss of occupational and recreational opportunities, and ultimately, the forfeiture of a unique culture and way of life. Passage of the Louisiana constitutional amendment establishing the Coastal Wetlands Conservation and Restoration Fund clearly demonstrated the public's overwhelming support to effectively address the State's coastal land loss problem. This statutorily dedicated fund has provided a State funding mechanism for cost sharing the New Cut Dune/Marsh Restoration Project.

Permits and Compliance

The proposed project must comply with a variety of Federal and State environmental statutes (Table 2). Construction of the project is authorized to begin as soon as all applicable environmental laws and regulations are met, project plans finalized, necessary landrights

acquired, and upon approval of the CWPPRA Task Force. The proposed project is not expected to cause adverse environmental impacts requiring compensatory mitigation.

8.0 TABLES, FIGURES AND CONSULTATION LETTERS

Table 1. Estimated Mean Percent Cover for All Species Occurring During the 1999 Sampling of 2x2m Braun_Blaunqet Vegetation Plots at East Island and Trinity Island.

	TE-20		TE-24	
Species	**% Stations**	**Mean Cover**	**% Stations**	**Mean Cover**
Paspalum sp.	0	0	2	10
Sueda linearis	0	0	2	25
Cyperus odoratus	0	0	2	
Cyperus polystachyos	0	0	2	10
Cynodon dactylon	42	12	89	11
Lolium perenne	0	0	2	1
Panicum amarum	38	7	45	14
Spartina alterniflora	42	6	0	0
Spartina patens	0	0	34	9
Sesuvium portulacastrum	4	1	2	1

Table 2. Environmental Compliance

Statute	Compliance
Clean Air Act, as amended	Full
Clean Water Act, as amended	Partial[1]
Archaeological and Historic Preservation Act of 1974	Full
Coastal Zone Management Act, as amended	Partial[2]
Endangered Species Act of 1973, as amended	Full
Fish and Wildlife Coordination Act, as amended	Full
Magnuson-Stevens Fishery Conservation and Management Act	Partial[3]
National Environmental Policy Act of 1969, as amended	Partial[4]
National Historic Preservation Act of 1966, as amended	Full
Protection of Wetlands (Executive Order 11990)	Full
Louisiana State and Local Coastal Resources Management Act of 1978	Partial[2]
Louisiana Water Control Act	Full

[1] An application for a Clean Water Act Section 404 permit and State of Louisiana Water Quality Certificate have been submitted.
[2] An application for a Coastal Use Permit has been submitted to the Louisiana Department of Natural Resources/Coastal Zone Management Division.
[3] Submittal of the EA is provided to initiate Federal consultation requirements pertaining to EFH under the Magnuson-Stevens Fishery Conservation and Management Act.
[4] Upon review of the EA by appropriate agencies and individuals, and approval of the FNSI, full compliance with this statute will be achieved

LIST OF COMMENT LETTERS

Letter of November 1, 2000, U.S. Fish and Wildlife Service

Letter of November 3, 2000, Louisiana Office of Cultural Development, State Historic Preservation Officer

Letter of November 6, 2000, U.S. Natural Resources Conservation Service.

9.0 REFERENCES

CWPPRA Engineering Work Group. April 30, 1998. *(TE-11a/TE-37) The Closure of New Cut Between Trinity and East island*. LDNR.

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U. S. Environmental Protection Agency. December 1993. *Environmental Assessment for the restoration of Isles Dernieres.*

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Letter of November 1, 2000, U.S. Fish and Wildlife Service

Letter of November 3, 2000, Louisiana Office of Cultural Development, State Historic Preservation Officer

Letter of November 6, 2000, U.S. Natural Resources Conservation Service.