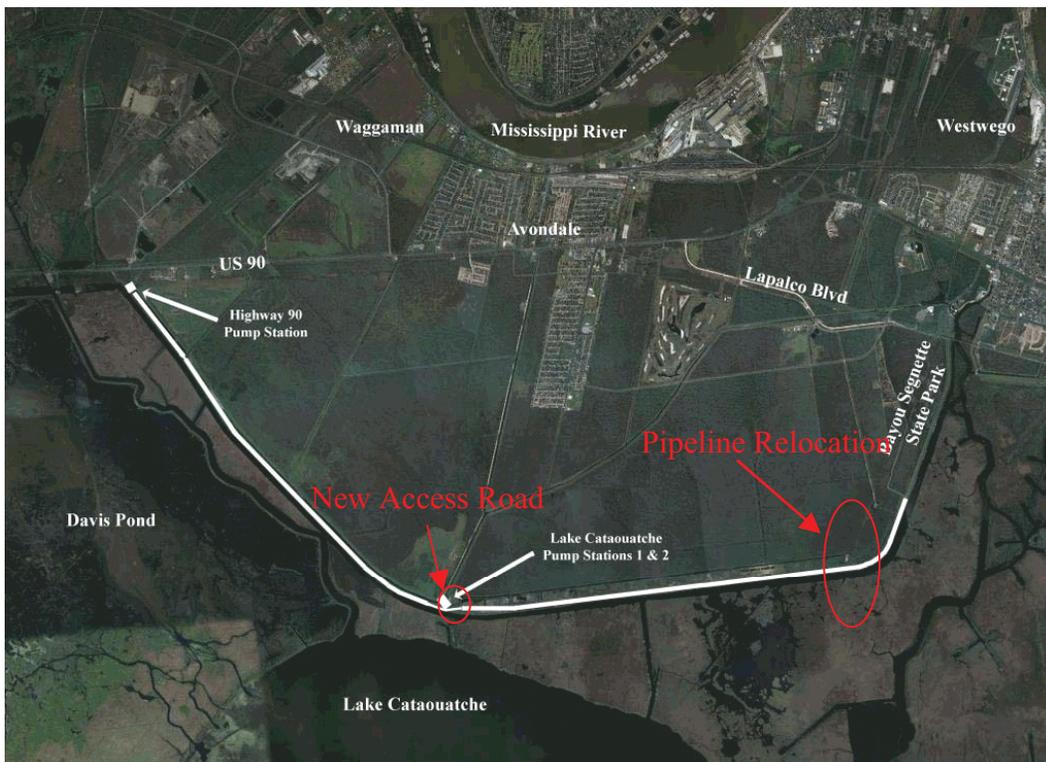


**DRAFT INDIVIDUAL ENVIRONMENTAL REPORT SUPPLEMENTAL**  
**WEST BANK AND VICINITY**  
**LAKE CATAOUCHE LEVEE**  
**JEFFERSON PARISH, LOUISIANA**  
**IERS 15.a**



**US Army Corps  
of Engineers®**

January 2011

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## 1. INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), has prepared this Individual Environmental Report Supplemental 15.a (IERS 15.a) to evaluate the potential impacts associated with the proposed oil/gas pipeline relocation and new access road and bridges within the West Bank and Vicinity (WBV), Lake Cataouatche Levee project area (figure 1). The proposed action is located in Jefferson Parish, Louisiana.

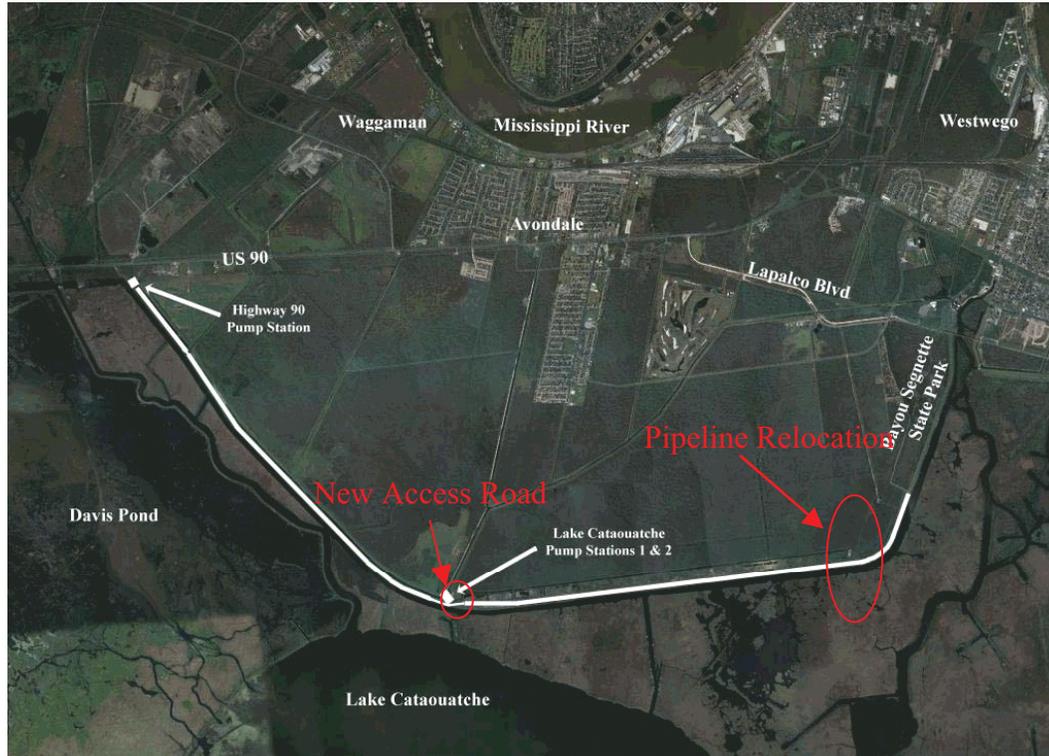


Figure 1. WBV Lake Cataouatche Project Area, oil/gas pipeline relocation site, and new access road location.

On June 12, 2008, the District Commander signed the Decision Record for IER 15. IER 15 is hereby incorporated by reference into this supplemental document, which includes, among other things, the Purpose and Need for the proposed action, Authority for the proposed action and Environmental Setting. Copies of the original IER and other supporting information are available upon request or at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov). This supplemental document has been prepared to address proposed changes to the Government approved plan within the IER 15 Lake Cataouatche Levee project area.

The term “100-year level of protection,” as it is used throughout this document, refers to a level of protection that reduces the risk of hurricane surge and wave-driven flooding that the New Orleans Metropolitan area has a 1 percent chance of experiencing each year.

## **1.1 ADDITIONAL REPORTS**

A number of studies and reports in the proposed project area have been prepared by the CEMVN, other Federal, state, and local agencies, research institutes, and individuals. Pertinent studies, reports and projects since May 2008 are discussed below. All other relevant reports are listed in the original IER 15 and are incorporated herein by reference.

West Bank and Vicinity Relevant Reports:

- On 9 February 2010, the CEMVN District Commander signed a Decision Record on IER Supplemental # 14.a entitled Westwego to Harvey Levee, Jefferson Parish, Louisiana.” The document evaluates the potential environmental impacts associated with construction of a larger levee footprint for the WBV-14.c.2 reach and revisions to fronting protection and floodwall construction at the Ames and Mt. Kennedy Pump Stations.
- On 22 January 2010, the CEMVN District Commander signed a Decision Record on IER # 32 entitled “Contractor-Furnished Borrow Material # 6, Acension, Plaquemines, and St. Charles Parishes, Louisiana. The document evaluates the potential environmental impacts associated with the actions taken by the commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 4 December 2009, the CEMNV District Commander signed a Decision Record on IER # 13 entitled “Hero Canal Levee and Eastern Tie-In, Plaquemines Parish, Louisiana.” IER 13 evaluates the potential environmental impacts associated with raise and/or constructing levees and other structures to meet the 100-year level of risk reduction for Belle Chase, Oakville and other unincorporated areas of Plaquemines Parish.
- On 28 September 2009, the CEMNV District Commander signed a Decision Record on IER # 30 entitled “Contractor-Furnished Borrow Material # 5, St. Bernard and St. James Parishes, Louisiana and Hancock County, Mississippi.” The document evaluates the potential environmental impacts associated with the action taken by commercial contractors as a result of excavating contractor furnished borrow areas of use in the construction for HSDRRS.
- On 31 July 2009, the CEMNV District Commander signed a Decision Record on IER # 28 entitled “Government-Furnished Borrow Material # 4, Plaquemines, St. Bernard, and Jefferson Parishes, Louisiana.” The document evaluates the potential environmental impacts associated with approving government-furnished borrow areas and an access route for use in construction of the HSDRRS.
- On 18 February 2009, the CEMVN District Commander signed a Decision Record on IER # 12 entitled “GIWW, Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana.” This document was prepared to evaluate the potential environmental impacts associated with raising and/or constructing levees, floodwalls, and other structures to meet the 100-year level of risk reduction for Harvey-Westwego, Gretna-Algiers, and Belle Chase areas.
- On 3 February 2009, the CEMVN District Commander signed a Decision Record on IER # 25 entitled “Government Furnished Borrow Material, Orleans, Jefferson, and

Plaquemines Parishes, Louisiana.” The document was prepared to evaluate the potential environmental impacts associated with the actions taken by the CEMVN as a result of excavating borrow areas for use in the construction of the HSDRRS.

- On 21 January 2009, the CEMVN District Commander signed a Decision Record on IER # 17 entitled “Company Canal Floodwall, Jefferson Parish, Louisiana.” The document was prepared to evaluate the proposed construction and maintenance of the 100-year level of hurricane and storm damage risk reduction along the Company Canal from the Bayou Segnette State Park to the New Westwego Pumping Station.
- On 20 October 2008, the CEMVN District Commander signed a Decision Record on IER # 26 entitled “Pre-Approved Contractor Furnished Borrow Material # 3, Jefferson, Plaquemines, and St. John the Baptist Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential environmental impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- On 26 August 2008, the CEMVN District Commander signed a Decision Record on IER # 14 entitled “Westwego to Harvey Levee, Jefferson Parish, Louisiana.” The document was prepared to examine the potential environmental impacts associated with the proposed construction and maintenance of 100-year level of risk reduction in the project area.
- On 30 May 2008, the CEMVN District Commander signed a Decision Record on IER # 22 entitled “Government Furnished Borrow Material, Plaquemines and Jefferson Parishes, Louisiana.” The document was prepared to evaluate the potential environmental impacts associated with the actions taken by the CEMVN as a result of excavating borrow areas for use in construction of the HSDRRS.
- On 6 May 2008, the CEMVN District Commander signed a Decision Record on IER # 23 entitled “Pre-Approved Contractor Furnished Borrow Material # 2, St. Bernard, St. Charles, Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential environmental impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.

## **2. ALTERNATIVES**

At the time of completion of the original IER 15 report, all engineering designs and necessary actions had not been finalized. Since that time, engineering details and additional required actions (e.g., oil/gas pipeline relocation and an access road near Lake Cataouatche pump stations 1 and 2) have been determined. Therefore, the changes that could result in further impact to the natural or human environment are being addressed in this IER Supplemental 15.a.

## **2.1 DESCRIPTION OF THE ALTERNATIVES**

No Action. Under the no-action alternative, only the Government-approved action, as described in IER 15 would be constructed

Proposed Action. The proposed action would be instrumental in providing 100-year level of risk reduction for Jefferson Parish, Louisiana. This proposed action was developed to ensure the most engineeringly feasible, least damaging, and cost effective alternative would be brought forward for construction.

### *Oil/Gas Pipeline Relocation*

The pipeline located in the 15a.2 reach currently is laid on the surface of the existing levee crown and slope (up and over configuration; figure 2). The Lake Cataouatche levee is currently being raised and enlarged to meet the requirements of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), and the pipeline in its current pipeline configuration would interfere with the approved levee construction on that levee segment.

The oil/gas pipeline would be permanently relocated approximately 170ft underground, under the levee, via directional drilling. This relocation method would require both truck and barge access to reach the temporary relocation work sites (drill entrance and exit sites) on either side of the Lake Cataouatche Levee (figure 3) The following project description starts in the most northern aspect of the project (at the Nicholle Blvd/access road intersection; figure 3) and ends at the very southern end of the project where the pipe would be back strung or placed in position to be “threaded” through the drill hole prior to drilling.



Figure 2. Facing west –Lake Cataouatche Levee with the Outer Cataouatche Canal on the flood side (to the left). The existing pipeline is going up and over the existing, non-upgraded levee.

A permanent existing road (12ft wide and 5625ft long) north of the Lake Cataouatche Levee would be resurfaced with limestone to withstand heavy truckloads during construction (figure 3). A temporary board road (16ft wide and 1601ft long) would be constructed at the end of the existing road to enable truck traffic to continue the rest of the way to reach the temporary relocation work site (figure 3). There would be two small areas, “wings,” temporarily cleared, grubbed and filled to provide adequate turn space for large trucks where the limestone access road meets the board road and again where the board road meets the work site. A temporary work site/staging area (200ft by 200ft drill pad and 20ft X 20ft drill pit) would be required and would require temporary clearing, grubbing, filling and stockpiling (figure 3).

The area parallel to both sides of the segment of the pipeline to be relocated would require temporary clearing, grubbing, excavation and stockpile. The area parallel to the pipeline would be excavated to approximately 20ft-25ft wide and 7ft-8ft deep for most of the length of the pipeline except for certain areas, such as at the levee crossing and near specific work sites. There would be no excavation where the pipeline currently crosses the levee, and there would be more excavation in those places where placement of the new pipeline would require a greater excavated work site. The width of the temporary excavation parallel to the pipeline would range from 20ft in most places to 70ft in some places depending on the required activity. The width of the adjacent temporary stockpile sites would range from 60ft to 130ft as necessary. Note: these are worst case excavation and stockpile estimates. Best management practices would be used to minimize impacts to the maximum extent practicable throughout construction.

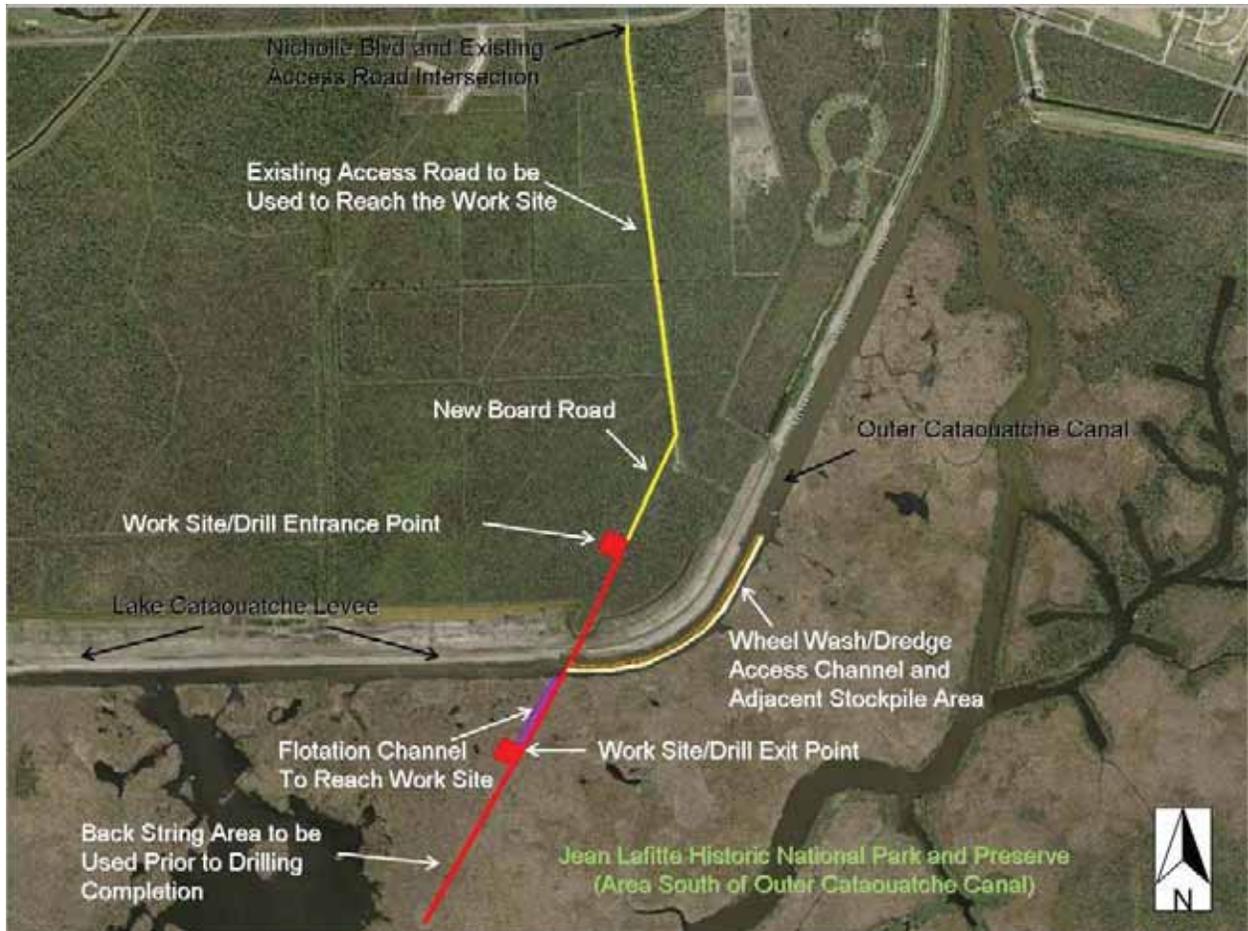


Figure 3. Pipeline relocation construction areas.

Temporary excavation and dredging would also be required in the Outer Cataouatche Canal. A 20ft by 365ft area would be excavated on both sides of the pipeline, as the pipeline crosses the open water bottom of the canal. Dredging would be required in the Outer Cataouatche Canal to provide barge access to the work site south of the Lake Cataouatche Levee. An approximate 70ft wide and 3620ft long access route would be cleared in the Outer Cataouatche Canal to allow for the barge draft (figure 3). Wheel washing, in which a tugboat would clear bottom sediment using propeller thrust, would be used first in attempt to merely spread the sediment without actually dredging. In the event wheel washing is not effective, bottom sediment would be dredged and placed adjacent the entire length of the required dredged area. The material would be temporarily stockpiled to a height of approximately 1.5ft in a stockpile site adjacent to the dredged area (figure 3).

A flotation channel (approximately 40ft wide and 1350ft long) running parallel with the pipeline would be required for the barge to reach the temporary work site (200ft by 200ft drill pad and 20ft X 20ft drill pit) south of the Lake Cataouatche Levee (figure 3). Material would be temporarily excavated and placed in approximately 35-60ft wide temporary disposal sites on either side of the newly created flotation channel. Material would be stockpiled in a scattered pattern across the stockpile site as to prevent permanent adverse impacts to the marsh on which it would be stacked. An area further south than the temporary work site and flotation channel would also require temporary

excavation (14ft wide by 3035ft long) and adjacent stockpiling (approximately 38ft-60ft wide by 3035ft long) to accommodate the pipe before the drilling is completed (figure 3). Once the underground drilling from north to south (from protected side to flood side of the levee) is completed, the actual pipe would then be threaded back through the drill hole from south to north.

Relocation of the pipeline would temporarily impact approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche Levee, approximately 12.9 acres of open canal bottom within the Outer Cataouatche Canal, and approximately 14.5 acres of high quality wetlands south of the Lake Cataouatche Levee within the Jean Lafitte National Historical Park and Preserve (table 1).

Multiple meetings were conducted with the CEMVN, National Park Service and the Utility company to ensure adverse impacts, especially impacts to high quality wetlands within the park, were minimized to the maximum extent practicable. The CEMVN agrees that all impacts occurring within the Jean Lafitte National Historical Park and Preserve would be mitigated for within the National Park. In addition, as a project feature, the impacted area within the Jean Lafitte National Historical Park and Preserve would be restored to its original state to the maximum extent practicable. Backfilling, planting, and other measures deemed necessary would be implemented in the park as project features immediately following construction in order to quickly restore the impacted environment and maintain the quality of the area that existed prior to construction.

#### *Temporary Access Road and Pontoon Bridges*

The temporary access road would be constructed for use in transporting construction equipment and materials to WBV15a.2 (figures 4 and 5). The primary use of the temporary road would be for hauling fill material from Churchill Farms borrow site to the project site which would allow a substantial decrease in haul distance, minimization of fuel consumption, minimization of road maintenance, etc. The temporary access road would be approximately 800 ft long and 40 ft wide and require two temporary canal crossings. The Avondale Canal crossing would consist of an approximately 40ft wide by 110ft long pontoon bridge, and the Cataouatche Canal crossing would consist of an approximately 40ft wide by 110ft long pontoon bridge. There are sections of the proposed temporary road alignment that are currently cleared; however, the remaining section of the road alignment must be cleared and grubbed.

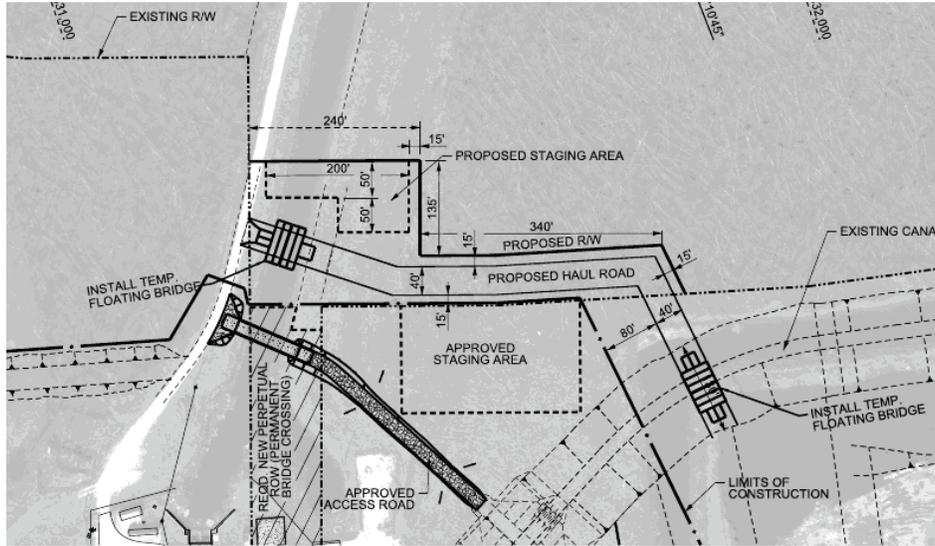


Figure 4. Proposed access road, staging area and pontoon bridges near the Lake Cataouatche Pump Stations 1 and 2.



Figure 5. Proposed temporary access road for WVB 15a.2 (aerial photo).

A small temporary staging area would also be required for access road construction. The staging area would be used as a working area (equipment staging) to construct the crossing. Additionally, the staging area would be used for storage (equipment, etc.) for the crossing construction. See attached plan for dimensions. Contractor shall dispose of cleared and grubbed organics offsite to an approved site in accordance with the governing jurisdiction.

The temporary access road, staging area and pontoon bridges would impact previously cleared area and approximately 0.29 acres of low quality, non-wet bottomland hardwood

habitat (table 1). Even though there is an adjacent approved access road, this temporary access would be required to avoid multiple contractors using one access point. Multiple contractors using a single access point would likely result in projects delays, increased costs, safety hazards and claims made by the contractors.

Table 1. IERS 15.a Proposed Impacts			
Impacts Associated with Pipeline Relocation Activities	Acres	Cubic Yards earthen material	Cubic Yards limestone
Access road	N/A	N/A	800
Area north of Lake Cataouatche Levee to be temporarily cleared, grubbed, excavated and stockpiled (including board road, work site/drill pad, drill pit and all excavation and stockpiling)	8	13,482	N/A
Canal Crossing temporary excavation and adjacent stockpile	0.4	4,326	N/A
Temporary Access channel wheel wash/dredging	5.8	14,077	N/A
Temporary Access wheel wash/dredging stockpile	6.7	N/A	N/A
Area south of Lake Cataouatche Levee to be temporarily excavated and stockpiled in the National Park (flotation channel, area parallel to pipeline, back string area)	14.5	41,615	N/A
Access road near Lake Cataouatche PS	0.29	N/A	N/A
Total project impacts*	35.7	73,500	800
*This total represents impacts to all habitat types and does not represent total impacts to wetland.			

## **2.2 ALTERNATIVES TO THE PROPOSED ACTION**

### *No-Action Alternative*

Without implementation of the proposed action, the Government's action, which was approved in IER 15, described as the no action alternative in this supplemental document, would be constructed.

### *Up and Over*

The up and over method of relocation for this location was not chosen because of its negative impacts to time, cost, and operation and maintenance over the life of the project. To construct another up and over configuration on the new levee would result in the need for future pipeline relocations due to planned future levee lifts. With each future levee lift, a relocation would be required, which could delay future lifts due to repeated relocation coordination, and additional costs would be incurred to have the utility company each time remove the pipe from the levee and place the pipe back over the levee once construction is complete. The up and over configuration would also add an additional expense for the Non-Federal Sponsor and impede their ability to operate and maintain the levee as the pipeline laying on top of the levee would be an obstruction in the levee section.

### *Sleeve through a T-Wall*

The construction of a floodwall and sleeve at this location is also not a feasible alternative as floodwalls along navigable waterways add greater risk elements in the hurricane and storm damage risk reduction system. Along with the risks presented if a floodwall were to be constructed along a waterway, a floodwall and sleeve configuration also introduces a greater number of transition points, points of potential failure, into the risk reduction system and is not a preferred relocation alternative. In addition, the sleeve through T-wall relocation was not chosen because the T-Wall section design and construction of the T-wall would not be completed prior to 1 June 2011. The levee section design is completed, and a contract has been let for its construction in order to have the system completed prior to 1 June 2011.

## **3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **3.1 ENVIRONMENTAL SETTING**

IER 15 contains a complete discussion of the Environmental Setting for the project area and is incorporated by reference into this document. As such, no discussion of environmental setting will be made in this document.

### 3.2 SIGNIFICANT RESOURCES

This section identifies the significant resources located in the vicinity of the proposed action, and describes in detail those resources that would be impacted, directly or indirectly, by the alternatives. Direct impacts are those that are caused by the action taken and occur at the same time and place (40 CFR §1508.8(a)). Indirect impacts are those that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR §1508.8(b)). Cumulative impacts are discussed in section 4.

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of national, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Further detail on the why these resources are considered significant can be found by contacting CEMVN, or on [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov), which offers information on the ecological and human value of these resources, as well as the laws and regulations governing each resource. Search for “Significant Resources Background Material” in the website’s digital library for additional information. Table 2 shows those significant resources found within the project area, and notes whether they would be impacted by the proposed action analyzed in this IER.

**Table 2**

**Significant Resources in Project Study Area**

Significant Resource	Impacted	Not Impacted
Water Way	X	
Wetlands	X	
Fisheries	X	
Essential Fish Habitat		X*
Wildlife	X	
Threatened or Endangered Species		X*
Non-wet Uplands	X	
Cultural Resources		X*
Recreational Resources		X*

**Table 2**

**Significant Resources in Project Study Area**

Significant Resource	Impacted	Not Impacted
Aesthetic (Visual) Resources		X*
Air Quality		X*
Noise		X*
Transportation		X*
Socioeconomic Resources <ul style="list-style-type: none"> <li>• Land Use, Population, Employment</li> <li>• Environmental Justice</li> </ul>		X*
* - Proposed action poses no or de minimus additional impacts from those described in IER 15 and as such are not discussed in this document Impacts to those resources from the approved project were described in detail in IER 15.		

Existing Conditions were discussed in IER 15 and are incorporated by reference for each significant resource discussed.

### 3.2.1 Water Way

#### **Future Conditions with No-Action**

Under the no action alternative, the Government's action, as approved in IER 15 would be constructed. Consequently, direct, indirect, and cumulative impacts to Outer Cataouatche Canal would not differ from those described previously in the original IER 15.

#### **Future Conditions with the Proposed Action**

##### *Direct and Indirect Impacts*

Temporary excavation and dredging would impact approximately 12.9 acres of open canal bottom within the Outer Cataouatche Canal.

A 20ft by 365ft (0.4 acres) area would be excavated on both sides of the pipeline, as the pipeline crosses the open water bottom of the canal (see sheet 3 attached packet).

Dredging would be required in the Outer Cataouatche Canal to provide barge access to the work site south of the Lake Cataouatche Levee. An approximate 70ft wide and 3620ft long (5.8 acres) access route would be cleared in the Outer Cataouatche Canal to allow for the barge draft. Wheel washing, in which a tugboat would clear bottom sediment using propeller thrust, would be used first in attempt to merely spread the sediment without actually dredging. In the event wheel washing is not effective, bottom sediment would be dredged and placed adjacent the entire length of the required dredged area. The material would be temporarily stockpiled to a height of approximately 1.5ft in a stockpile site adjacent to the dredged area (6.7 acres)..

There is the potential for temporary adverse impacts to water quality due to increased turbidity in the Outer Cataouatche Canal during the pipeline relocation; however, adherence to best management practices would minimize the risk of these water quality effects. There is also the potential for a minimal adverse impact to water quality associated with a temporary increase in turbidity within the Avondale and Cataouatche canals during construction and use of the two pontoon bridges for the access road near the Lake Cataouatche pump stations 1 and 2. Each bridge would impacts > 0.1 acres.

#### *Cumulative Impacts*

Potential cumulative impacts to the canal from the proposed action would involve the combined effects to the canal from the multiple WBV projects in the area. Impacts from the proposed action on the canal would be primarily short-term.

### **3.2.2 Wetlands**

#### **Future Conditions with No-Action**

Under the no action alternative, the Government's action, as approved in IER 15 would be constructed. Consequently, direct, indirect, and cumulative impacts to wetlands would not differ from those described previously in the original IER 15.

#### **Future Conditions with the Proposed Action**

##### *Direct Impacts*

The oil/gas pipeline relocation would impact approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche levee and approximately 14.5 acres of high quality wetlands south of the Lake Cataouatche levee within the Jean Lafitte National Historical Park and Preserve. Multiple meetings were conducted with the CEMVN, National Park Service and the Utility company to ensure adverse impacts, especially impacts to high quality wetlands within the park, were minimized to the maximum extent practicable. The CEMVN agrees that all impacts occurring within the Jean Lafitte National Historical Park and Preserve would be mitigated for within the National Park. In addition, as a project feature, the impacted area within the Jean Lafitte National Historical Park and Preserve would be restored to its original state to the maximum extent practicable. Backfilling, planting, and other measures deemed necessary would be implemented in the park as project features immediately following construction in order to quickly restore the impacted environment and maintain the quality of the area that existed prior to construction.

While the project area on the flood side includes tidally influenced, higher quality wetlands, the vast majority of the project area on the protected side has been previously

disturbed. The remaining wooded areas possess some characteristics of wetlands; however, due to pumped drainage since the early 1960's, the amount and quality of those wetlands has diminished over time. Three pumping stations now affect the hydrology of the area - Cataouatche Pump Stations No. 1 and No. 2, and the Bayou Segnette Pump Station, constructed in the mid-1970's, 1985, and 1986, respectively. Although the pump stations were constructed to provide drainage for the Bridge City and Westwego areas, they connected portions of the study area through a series of drainage canals. Pumping the area to an artificially low water table has caused a consolidation and decay of organic materials, resulting in subsidence, and has contributed to the conversion of wetlands to bottomland hardwoods. The bottomland hardwoods remaining in the project area have a low quality value because of the excessive quantity of invasive Chinese tallow trees.

#### *Indirect Impacts*

Potential indirect impacts from the proposed action would primarily consist of construction-related effects from increased turbidity on the wetland areas surrounding the project area from the construction site runoff. The area affected would be small relative to the size of the adjacent wetlands. Construction-related runoff into the wetlands would be managed through best management practices where possible, and the effects from construction would be temporary and short in duration.

#### *Cumulative Impacts*

Potential cumulative impacts to the wetlands from the proposed action would involve the combined effects to wetlands from the multiple WBV projects in the area. The amount of wetlands temporarily impacted by construction of the proposed action is a small fraction of similar habitat available in southeastern Louisiana. Unavoidable impacts to wetlands will be mitigated so as to negate any cumulative loss of this significant resource.

### **3.2.3 Non-Wet Uplands**

#### **Future Conditions with No-Action**

Under the no action alternative, the Government's action, as approved in IER 15 would be constructed. Consequently, direct, indirect, and cumulative impacts to fisheries would not differ from those described previously in the original IER 15.

#### **Future Conditions with the Proposed Action**

##### *Direct Impacts*

The access road and staging area would impact previously cleared area and approximately 0.29 acres of non-wet, low quality, bottomland hardwoods.

There are sections of the proposed temporary road alignment that are currently cleared; however, the remaining section of the road alignment must be cleared and grubbed. The proposed temporary access road would directly impact 0.29 acres of very low quality upland habitat consisting mostly of the invasive species, Chinese Tallow (*Triadica sebifera* (Syn. *Sapium sebiferum*)) with some intermittent low quality bottom land

hardwood species such as black willow (*Salix nigra*) (figures 6). There would be no wetland impacts. The levee turf extends to the canal water edge (figure 7).



Figure 6. Tall stand of Chinese Tallow trees in the area to be cleared for the proposed access road.



Figure 7. Location where canal crossing would be constructed.

*Indirect Impacts*

Potential indirect impacts from the proposed action would primarily consist of construction-related effects from increased turbidity on the wetland areas surrounding the project area from the construction site runoff. The area affected would be small relative to the size of the adjacent wetlands. Construction-related runoff into the wetlands would be managed through best management practices where possible, and the effects from construction would be temporary and short in duration.

*Cumulative Impacts*

Potential cumulative impacts from the proposed action would involve the combined effects to non-wet, bottomland hardwoods from the multiple WBV projects in the area. The amount of temporary impacts due to construction of the proposed action is a small fraction of similar habitat available in southeastern Louisiana. Unavoidable impacts to bottomland hardwoods will be mitigated so as to negate any cumulative loss of this significant resource.

### **3.2.4 Fisheries**

#### **Future Conditions with No-Action**

Under the no action alternative, the Government's action, as approved in IER 15 would be constructed. Consequently, direct, indirect, and cumulative impacts to fisheries would not differ from those described previously in the original IER 15.

#### **Future Conditions with the Proposed Action**

*Direct Impacts*

Temporary excavation and dredging would impact approximately 12.9 acres of open canal bottom within the Outer Cataouatche Canal. Construction of the two pontoon bridges for the access road near the Lake Cataouatche pump stations 1 and 2 would impact less than 0.2 acres of open water, canal bottom. The dredging, stockpiling and bridge construction would destroy the immobile and less-mobile species in the filled area. Most mobile species within the canal would avoid the areas impacted by construction and could move from areas being temporarily filled by the proposed action to adjacent wetland and canal habitat.

Impacts on less-mobile benthic populations from construction activities would be short-term with turbidity effects potentially lasting up to several months after completion. The area that would be disturbed for the proposed action is a small proportion of the similar aquatic habitat available in the vicinity. Once the proposed action is complete, sediment would settle, benthos would repopulate, and other mobile aquatic species would return.

*Indirect Impacts*

Potential indirect impacts from the proposed action would primarily consist of effects from increased turbidity from construction activities which could immediately reduce

water quality in the project area and negatively impact fish. However, construction-related runoff into the canal would be managed through best management practices and would be reduced by the movement of the tides. Those impacts on fisheries, prey species, or their habitat would be short-term with turbidity effects potentially lasting up to several months after completion.

### *Cumulative Impacts*

Potential cumulative impacts on fish habitat from the proposed action would involve the combined effects on suitable fish habitat in wetlands, canals, and lakes from the multiple WBV projects in the area. The project area would be modified only temporarily and very slightly in context of the size of the Outer Cataouatche Canal.

## **3.2.5 Wildlife**

### **Future Conditions with No-Action**

Under the no action alternative, the Government's action, as approved in IER 15 would be constructed. Consequently, direct, indirect, and cumulative impacts to wildlife would not differ from those described previously in the original IER 15.

### **Future Conditions with the Proposed Action**

#### *Direct Impacts*

The greatest potential for effects on wildlife associated with the implementation of the proposed action would occur during the initial clearing and grubbing. The presence of construction-related activity, machinery, and noise would be expected to cause most wildlife to avoid the area during the construction period. Impacts from construction would disturb wildlife, but most of these impacts would be short-term. Adjacent habitat would stabilize after the construction is completed allowing species to return. Most wildlife within the adjacent wetland habitats would return with the cessation of noise and activity associated with relocation. Wildlife displaced by the temporary loss of the wetland required for the proposed action would be able to move into the extensive adjacent wetland habitat.

Recently disturbed areas on the protected side that are to be utilized for construction have little to no wildlife habitat function. Direct effects to wildlife within the footprint of disturbance from implementing the proposed action would be minimal. Some disturbance-tolerant individuals of certain species may be permanently displaced or destroyed during construction. As such, constructing the proposed action would have a temporary disturbance on species within the edge and aquatic habitat, and would create only temporary effects to wildlife.

Proposed wetland impacts are minimal and temporary, thus the loss of habitat during construction would result in a relatively minor reduction in potential future nesting area for birds and foraging area for birds and other wildlife.

Although birds are highly mobile and able to move to other habitats in the vicinity, local populations of species that nest in colonies could be adversely affected if construction activities caused abandonment of nesting sites. In order to minimize the potential for construction under the proposed action to disturb colonial-nesting wading birds, procedures recommended by FWS would be followed. Prior to construction, the project area would be inspected by FWS or other qualified personnel for the presence of nesting colonies during the nesting season. Construction-related activities that would occur within 1,000 ft of a colony would be restricted to the non-nesting period, which in this region generally extends from September 1 to February 15, depending on the species present. This 1,000-ft buffer would be maintained unless coordination with FWS indicates that the buffer zone may be reduced based on the species present and other specifics of the situation.

Prior to construction, the project area would be inspected by FWS or other qualified personnel for the presence of Bald Eagle nest trees, including both active and alternate nests. Construction-related activities that would occur within 660 ft of a nest would be performed outside the bald eagle nesting season, which in this region generally extends from October 1 to May 15. This 660-ft buffer would be maintained unless coordination with FWS indicates that the buffer zone may be reduced based on the specifics of the situation. Damage to nest trees would be avoided, including damage to their root systems through soil disturbance or compaction.

The above procedures for preventing disturbance of colonial-nesting birds and bald eagle nesting sites, should they become established in the area prior to construction, would minimize the potential for adverse impacts on these species from the proposed action.

A small number of less mobile and wetland dependent species (i.e. mice, reptiles, amphibians) may be lost during construction, however, most wildlife species would likely avoid the vicinity of the proposed action during the construction period and some that are not dependent on the habitats would return following the completion of construction.

Coordination with the U.S. Fish and Wildlife Service (USFWS) indicates that no significant effects to fish and wildlife would be expected to occur from implementing the proposed action. As such, the responsibilities of the CEMVN to protect migratory birds under Executive Order (EO) 13186 and the Migratory Bird Treaty Act (16 USC 703 et seq.) will have been met. This EO establishes further coordination requirements with the USFWS when agency actions have, or are likely to have, a measurable negative effect on migratory bird populations.

#### *Indirect Impacts*

Indirect effects to wildlife species due to construction activities (e.g., noise, vibration) within adjacent wetlands or aquatic habitat would be short term and temporary. Mobile species could find refuge in other areas until the construction disturbance is over. In addition, species sensitive to disturbance would likely not utilize these areas because of the recent disturbances related to ongoing construction.

#### *Cumulative Impacts*

Potential cumulative impacts on wildlife from the proposed action would involve the combined effects of habitat loss and displacement of wildlife populations from the multiple WBV projects in the area. The displacement of the majority of wildlife would

be short-term during the construction period, and the displaced individuals would likely return following project completion.

Movement of the limited numbers of wildlife that currently inhabit the project area's terrestrial and aquatic habitats into surrounding, unimpacted habitats would not be expected to result in exceedances of the carrying capacity of the extensive, adjacent habitats. Thus, the potential cumulative impacts on wildlife from the proposed action in conjunction with other projects in the region would affect relatively small populations and habitat areas, and the extensive habitats remaining in the region would have the capacity to accommodate those populations.

## **4. CUMULATIVE IMPACTS**

NEPA requires a Federal agency to consider not only the direct and indirect impacts of a proposed action, but also the cumulative impact of the action. Cumulative impact is defined as the “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR §1508.7).” Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. These actions include on- or off-site projects conducted by government agencies, businesses, or individuals that are within spatial or temporal boundaries of the actions considered in this IER Supplemental.

As indicated previously, in addition to this IER Supplemental, the CEMVN is preparing a draft CED that will describe the work completed and the work remaining to be constructed. The purpose of the draft CED will be to document the work completed by the USACE on a system-wide scale. The draft CED will describe the integration of individual IERs into a systematic planning effort. Additionally, the draft CED will contain updated information for any IER that had incomplete or unavailable data at the time it was posted for public review. Overall cumulative impacts and future operations and maintenance requirements will also be included. The discussion provided below describes an overview of other actions, projects, and occurrences that may contribute to the cumulative impacts previously discussed.

Negative effects associated with the implementation of the proposed action that could contribute cumulatively with the effects of other projects include construction related increases in truck traffic, noise and vibration, vehicle and equipment emissions as well as the accelerated wear of transportation infrastructure including roads, bridges and culverts. Other impacts include the temporary loss of approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche Levee, 12.9 acres of open canal bottom within the Outer Cataouatche Canal, 14.5 acres of high quality wetlands south of the Lake Cataouatche Levee within the Jean Lafitte National Historical Park and Preserve, and 0.29 acres of low quality, non-wet bottomland hardwood habitat.

The CEMVN agrees that all impacts occurring within the Jean Lafitte National Historical Park and Preserve would be mitigated for within the National Park. In addition, as a project feature, the impacted area within the Jean Lafitte National Historical Park and Preserve would be restored to its original state to the maximum extent practicable.

Backfilling, planting, and other measures deemed necessary would be implemented in the park as project features immediately following construction in order to quickly restore the impacted environment and maintain the quality of the area that existed prior to construction.

Until final designs are completed on all reaches of the LPV and WBV projects, the total habitat loss related to the implementation of all the IERs cannot be finalized. The current totals are presented in table 3. The positive cumulative effects of implementing the proposed action would be the temporary expansion of the local economy by construction-related activities.

The proposed action would have cumulative beneficial impacts to the socioeconomics of the region. The HSDRRS would be improved to provide additional hurricane, storm, and flood damage reduction to minimize the threat of inundation of infrastructure due to severe tropical storm events. Improved hurricane, storm, and flood damage reduction measures benefit all property owners, regardless of income or race, increases confidence, could reduce insurance rates, and allows for development and re-development of existing urban areas.

Table 3 shows the cumulative compensatory mitigation that will be completed by the CEMVN. This table will be updated as potential impacts are assessed in forthcoming IERs.

Cumulative impacts for the actions considered in all of the IERs will be incorporated into the CED.

**Table 3. HSDRRS Impacts and Compensatory Mitigation to be Completed**

IER	Parish	Side	Non-wet BLH		BLH (acres)	BLH		Swamp		Marsh	Marsh	Water
			acres	AAHUs		acres	AAHUs	acres	AAHUs			
1 LaBranche Levee	St. Charles	Protected	-	-	-	-	-	137.50	73.99	-	-	-
		Flood	-	11.33	8.09	-	-	143.57	110.97	-	-	-
1 Supp. LaBranche Levee	St. Charles	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
2 West Return Floodwall	St. Charles, Jefferson	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	17.00	-	9.00	-	75.00
3 Jefferson Lakefront Levee	Jefferson	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
4 Orleans Lakefront Levee	Orleans	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
5 Lakefront Pump Stations	Jefferson, Orleans	Protected	-	-	-	-	-	-	-	-	-	3.20
		Flood	-	-	-	-	-	-	-	-	-	-
6 Citrus Lands Levee	Orleans	Protected	-	-	-	-	-	-	-	-	-	6.90
		Flood	-	-	-	-	-	0.00	-	-	-	-
7 Lakefront Levee	Orleans	Protected	-	151.70	79.30	-	-	-	-	100.40	36.80	106.00
		Flood	-	30.00	11.90	-	-	-	-	70.00	37.20	-
7 Supplemental Lakefront Levee	Orleans	Protected	-	17.30	9.90	-	-	-	-	18.60	6.10	-
		Flood	-	2.80	0.30	-	-	-	-	56.00	29.80	-
8 Bayou Bienvenue/Dupre	St. Bernard	Protected	-	-	-	-	-	-	-	-	-	0.30
		Flood	-	-	-	-	-	-	-	-	-	-
9 Caenarvon Floodwall	St. Bernard	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	10.00	4.65	0.66	-	-	1.90	-	1.20	-	-
10 Chalmette Loop	St. Bernard	Protected	-	38.32	16.44	-	-	-	-	106.55	57.31	95.00
		Flood	-	35.31	15.22	-	-	-	-	323.04	209.94	-
11 Tier 2 Borgne IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	15.00	2.59	-	-	122.00	-	24.33	-	-
11 Tier 2 Pontchartrain IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	-	-	7.00
		Flood	-	-	-	-	-	-	-	-	-	-
12	Jefferson,	Protected	-	251.70	177.3	-	-	-	-	-	-	-

**West Bank and Vicinity  
Lake Cataouatche Levee, Jefferson Parish, Louisiana**

IER	Parish	Side	Non-wet BLH		BLH (acres)	BLH		Swamp		Marsh		Water
			acres	AAHUs		AAHUs	acres	acres	AAHUs	acres	AAHUs	
GIWW, Harvey, Alotiers 13 Hero Canal, East Terminus	Orleans, Plaquemines	Flood	-	-	2.30	1.90	74.90	38.50	-	-	-	-
		Protected	-	-	13.00	7.80	-	-	-	-	-	-
		Flood	-	-	19.00	10.59	39.00	28.87	-	-	-	-
14 Westwego to Harvey Levee	Jefferson	Protected	-	-	45.00	30.00	-	-	-	-	-	-
		Flood	-	-	45.50	18.58	29.75	17.02	-	-	-	-
14 Supp. Westwego to Harvey Levee	Jefferson	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	42.00	24.00	-	-	-	-
15 Lake Cataouatche	Jefferson	Protected	-	-	23.50	6.13	-	-	-	-	-	-
		Flood	-	-	3.60	1.35	-	-	-	-	-	-
16 Western Tie-in	Jefferson, St. Charles	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	137.80	-	66.30	-	-
16 Supplemental Western Tie-in	Jefferson, St. Charles	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	79.10	37.26	-	-	-	-	-	-
17 Company Canal Floodwall	Jefferson	Protected	-	-	5.50	2.69	-	-	-	-	-	-
		Flood	-	-	-	-	19.00	17.09	-	-	-	-
18 GFBM	Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles	Protected	379.30	152.32	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
19 CFBM	Hancock County, MS; Iberville, Jefferson, Orleans, Plaquemines, St. Bernard	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
22 GFBM	Jefferson, Plaquemines	Protected	244.69	118.54	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
23 CFBM	Hancock County, MS; Plaquemines,	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
25 GFBM	Jefferson, Orleans, Plaquemines	Protected	933.00	284.00	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
26 CFBM	Jefferson, Plaquemines, St. John the Baptist, Hancock, MS	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-
27 Lakefront Pump Stations	Orleans	Protected	-	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-	-

**West Bank and Vicinity  
Lake Cataouatche Levee, Jefferson Parish, Louisiana**

IER	Parish	Side	Non-wet BLH		BLH (acres)	BLH	Swamp		Marsh		Water
			acres	AAHUs			acres	AAHUs	acres	AAHUs	
28 GFBM	Jefferson, Plaquemines, St. Bernard	Protected	19.94	8.45	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
29 CFBM	Orleans, St. Tammany, St. John the	Protected	107.30	48.60	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
30 CFBM	St. Bernard and St. James, Hancock, MS	Protected	225.00	189.40	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
31 CFBM	E. Baton Rouge, Jeff. Lafourche, Plaquem, St. Bern, St. Tam, Hancock, MS	Protected	965.3	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
32 CFBM	Ascension, Plaquemines, St. Charles	Protected	202.10	97.43	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
Totals		Protected	3086.63	708.32	545.52	329.22	137.50	73.99	225.55	100.21	00.00
		Flood	10.00	4.65	323.80	163.33	350.02	237.30	740.54	388.42	230.99
		Both	3096.63	712.97	869.32	492.55	487.52	311.29	966.09	488.63	230.99

- Not applicable to the IER or number impacted is 0

GFBM: Government Furnished Borrow Material // CFBM: Contractor Furnished Borrow Material

## **5. SELECTION RATIONALE**

Multiple meetings were conducted with the CEMVN, National Park Service and the Utility company to ensure adverse impacts, especially adverse impact to high quality wetlands within the Jean Lafitte National Historical Park and Preserve, were minimized to the maximum extent practicable. Relocation of the pipeline underground via directional drilling would prevent the need for future relocation for this same pipeline during future levee lifts, which will reduce the potential for additional environmental impacts, service interruptions, and incurred costs in the future.

With the understanding the proposed action would result in temporary loss of approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche Levee, 12.9 acres of open canal bottom within the Outer Cataouatche Canal, 14.5 acres of high quality wetlands south of the Lake Cataouatche Levee within the Jean Lafitte National Historical Park and Preserve, and 0.29 acres of low quality, non-wet bottomland hardwood habitat, the CEMVN agrees that all impacts occurring within the Jean Lafitte National Historical Park and Preserve would be mitigated for within the National Park. In addition, the CEMVN agrees to include as a project feature, that the impacted area within the Jean Lafitte National Historical Park and Preserve would be restored to its original state to the maximum extent practicable. Backfilling, planting, and other measures deemed necessary would be implemented in the park as project features immediately following construction in order to quickly restore the impacted environment and maintain the quality of the area that existed prior to construction. Though the directional drill relocation method would result in greater environmental impacts than an up and over configuration or sleeve through T-wall configuration, this directional drill alternative was determined to reduce the most risk, be the most engineeringly feasible, and time and cost effective.

An up and over (up and over the levee) configuration was the least preferred alternative as it introduced the most risk into the system and would incur the most cost to construct and operate and maintain in the future. Having an existing pipeline up and over the levee has also proven to impede local sponsor operation and maintenance of the levee over time. Aside from impeding operation and maintenance, approximately 4 lifts are anticipated for this levee segment, in which the up and over configuration would have to be moved each time. This would require major coordination efforts as was undergone for this relocation, and could result in major construction delays as the relocation can only be done during certain times of the year depending on energy consumption. Multiple relocations of the same pipe could also prove to damage the the pipe over time.

A pipeline sleeve through a floodwall configuration would introduce less risk than the up and over configuration, but would be more inherently risky than the directional drill alternative as it would be a floodwall constructed along a navigable waterway and would create additional transitions in the system.

The proposed action would not only ensure uninterrupted operations for the utility company; it would enable timely construction of the Hurricane and Storm Damage Risk Reduction System that would provide significant public benefit and serve local, state, and national interest by providing 100 year level of risk reduction while minimizing adverse impacts. If this relocation is not constructed concurrent with or prior to the construction of the risk reduction system in the area, gaps will exist within the Hurricane Storm Damage Risk Reduction System.

In addition, even though there is an adjacent approved access road near the Lake Cataouatche Pumps stations 1 and 2, the temporary access road proposed within this document would be required to avoid multiple contractors using one access point. Multiple contractors using a single

access point would likely result in projects delays, increased costs, safety hazards and claims made by the contractors.

If the proposed changes in design are not implemented, the 100-year level of risk reduction will not be achieved for WBV Lake Cataouatche levee reach 15.a.2. On the basis of risk reduction and reliability, environmental impacts, cost, time and constructability, the proposed action for the WBV-15.a.2 levee reach was selected as the least damaging practicable alternative to provide the 100 year level of risk reduction.

Taking no action, although avoiding the direct effects from construction of the 100-year level of risk reduction, would predictably and repeatedly lead to indirect effects from the risk of large-scale flooding and the associated clean up.

## **6. COORDINATION AND CONSULTATION**

### **6.1 AGENCY COORDINATION**

Preparation of this IER has been coordinated with appropriate Congressional, Federal, state, and local interests, as well as environmental groups and other interested parties. An interagency environmental team was established for this project in which Federal and state agency staff played an integral part in the project planning and alternative analysis phases of the project. This interagency environmental team was integrated with the CEMVN Project Delivery Team to assist in the planning of this project and to complete a mitigation determination of the potential direct and indirect impacts of the proposed action. Monthly interagency meetings with resource agencies were also held concerning this and other CEMVN IER projects. The following agencies, as well as other interested parties, received copies of the draft IER:

U.S. Department of the Interior, Fish and Wildlife Service  
U.S. Department of the Interior, National Park Service  
U.S. Environmental Protection Agency, Region VI  
U.S. Department of Commerce, National Marine Fisheries Service  
U.S. Natural Resources Conservation Service, State Conservationist  
Advisory Council on Historic Preservation  
Governor's Executive Assistant for Coastal Activities  
Louisiana Department of Wildlife and Fisheries  
Louisiana Department of Natural Resources, Coastal Management Division  
Louisiana Department of Natural Resources, Coastal Restoration Division  
Louisiana Department of Environmental Quality  
Louisiana State Historic Preservation Officer

Multiple meetings were conducted with the USACE, National Park Service and the Utility company to ensure adverse impacts to the park were minimized to the maximum extent practicable. A site visit was conducted October 14, 2011 to discuss worst case impacts and to specifically assess on site where the impacts would occur, specifically where in the Jean Lafitte National Park and Preserve. The relocation design engineers left with an understanding of the

environmental concerns and took the Park Service's concerns into consideration as the final plans were developed. Another meeting with the design engineers and the Park Service was conducted on December 16, 2010 to discuss the final relocation plans and to show how impacts would be minimized throughout the relocation process.

National Oceanic and Atmospheric Administration (NOAA) NMFS concurred via teleconference on 7 June, 2010 that the proposed action would not affect threatened or endangered species nor essential fish habitat.

A Water Quality Certification has been received from with the Louisiana Department of Environmental Quality (LDEQ) by letter dated 23 June 2010.

Section 106 of the National Historic Preservation Act, as amended, requires consultation with SHPO and Native American tribes. SHPO reviewed the proposed action and determined that it would not adversely affect any cultural resources by letter dated 22 February 2010. Eleven Federally recognized tribes that have an interest in the region were given the opportunity to review and comment on the proposed action. One tribe responded there are no known impacts associated with the proposed action in a letter dated 4 May 2010.

In compliance with the Coastal Zone Management Act, CEMVN has coordinated with LDNR for consistency with the Louisiana Coastal Resource Program (LCRP). The Louisiana Department of Natural Resources (LDNR) has reviewed the proposed action for consistency with the Louisiana Coastal Resources Program (LCRP). The LDNR has neither accepted nor denied the CEMVN Consistency Determination; however, the CEMVN has coordinated closely with LDNR and a decision from LDNR regarding the CEMVN Consistency Determination is expected soon. Coastal Zone Consistency is pending resolution of National Park Service concerns regarding the method of proposed pipeline relocation and is expected no later than January 19, 2011.

In a letter dated 11 January 2011, the Louisiana Department of Wildlife and Fisheries commented on the proposed action. The following project recommendations were thereby incorporated into the revised CZC determination submittal and included in this document:

The Corps of Engineers-New Orleans District shall implement adequate erosion/sediment control measures to insure that no sediment or other activity related debris are allowed to enter wetland areas located adjacent to construction areas. Accepted measures include the proper use of vegetated buffers, silt fences or other Environmental Protection Agency construction site stormwater runoff control best management practices.

The COE shall use clean fill material during construction of temporary access roads in wetlands areas. Upon abandonment, the affected areas shall be restored to pre-project conditions.

One 24 inch culvert shall be installed every 250 feet when constructing access roads through wetlands. Culverts should be maintained to ensure that existing flow of surface water is uncompromised.

All forested vegetation cleared during construction activities is to be removed and hauled offsite to a non-wetlands disposal location, or chipped and spread on site in a manner that is beneficial to the surrounding environment (i.e., placed in thin layers not to exceed 4 inches).

The COE shall develop a mitigation plan designed to off-set impacts to fish and wildlife resources. The mitigation plan shall be approved by the resources and

regulatory agencies. Mitigation should occur simultaneously with the construction activities in order to ensure that all necessary mitigation is carried out.

The USFWS provided programmatic recommendations, in the “Draft Fish and Wildlife Coordination Act Report for the Individual Environmental Reports (IER), Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4)” in November 2007. The uncertainties in the design of several projects prohibited a complete evaluation of the impacts to fish and wildlife species and the reporting responsibilities under Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et seq.). Therefore, a subsequent final supplemental report will be provided by the USFWS at a later date but prior to the Agency’s final decision on how it will proceed. The draft (programmatic) Fish and Wildlife Coordination Act Report for the IERs dated November 2007 can be accessed through the [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov) website.

The USFWS’ programmatic recommendations applicable to this project will be incorporated into project design studies to the extent practicable, consistent with engineering and public safety requirements. The USFWS’ programmatic recommendations, and CEMVN’s response to them, can be found within IER 15 and are hereby incorporated by reference.

The USFWS has reviewed the proposed action and in a Planning Aid letter dated 9 July 2010, stated that the USFWS is unaware of any known threatened or endangered species in the proposed project area. The draft Coordination Act Report was received 12 January 2011.

Below are the USFWS project specific recommendations from the 12 January 2011 draft CAR, and CEMVN’s response to them:

**Recommendation:** All Feasible alternatives to HDD that would reduce impacts to the JLNHPP should be investigated to ensure impacts to public lands are avoided or minimized. The results of that investigation should be presented in the IERS.

**CEMVN Response:** Four alternatives (no action, directional drill, up and over and sleeve through a floodwall) were evaluated within the alternative evaluation process. Two alternatives (up and over and sleeve through a floodwall) were eliminated from further evaluation due to increased risk, time and cost, while the other two were brought forward through full evaluation within this document..

**Recommendation:** To the greatest extent possible, situate flood protection features so that destruction of wetlands and non-wet bottomland hardwoods are avoided and minimized.

**CEMVN Response:** Acknowledged.

**Recommendation:** Forest clearing associated with project features should be conducted during fall or winter to minimized impacts to nesting migratory birds, when practicable.

**CEMVN Response:** Acknowledged.

**Recommendation:** Further detailed planning of project features (e.g., Design Document Report, Engineering Documentation Report, Plans and Specifications, or similar documents) should be coordinated with the Service, NMFS, LDWF, Environmental Protection Agency (EPA), JLNHPP, and Louisiana Department of Natural Resources (LDNR). The service shall be

provided an opportunity to review and submit recommendations on all the work addressed in those reports.

CEMVN Response: Acknowledged.

Recommendation: The U.S. Army Corps of Engineers (Corps) should avoid impacts to aNPS lands, if feasible. If not feasible, the Corps should establish and continue coordination with the NPS staff until construction of that feature is complete and prior to any subsequent maintenance. Unavoidable impacts, when permissible by that agency, should be minimized and appropriately mitigate on NPS lands.

CEMVN Response: Acknowledged.

Recommendation: If a proposed project feature is changed significantly or is not implemented within one year of the date of our Endangered Species Act consultation letter, we recommend that the Corps reinitiate coordination with this office to ensure that the proposed action would not adversely affect any federally listed threatened or endangered species or their habitat.

CEMVN Response: Acknowledged.

Recommendation: The Corps shall fully compensate for any unavoidable losses of wetland habitat or non-wet bottomland hardwoods caused by project features.

CEMVN Response: Acknowledged.

Recommendation: To further reduce impacts to the JLHNPP all excavated material within the freshwater marshes should be used to backfill the proposed dredged channel. No disposed excavated material should remain above the marsh surface. Dredged material used to backfill should be replaced to the approximate same elevation as the adjacent marshes. Replanting of the disturbed site should be conducted according to JLHNPP specifications, if requested.

CEMVN Response: Acknowledged.

Recommendation: Acquisition, habitat development, maintenance, and management of mitigation lands should be allocated as first-cost expenses of the project, and the local project sponsor should be responsible for operational costs. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation, then the Corps should provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

CEMVN Response: Acknowledged.

Recommendation: Any proposed change in mitigation features or plans should be coordinated in advance with the Service, JLHNPP, NMFS, LDWF, EPA and LDNR.

CEMVN Response: Acknowledged.

## **7. MITIGATION**

Mitigation for unavoidable impacts to the human and natural environment described in this and other IERs will be addressed in separate mitigation IERs. CEMVN has partnered with Federal and state resource agencies to form an interagency mitigation team that is working to assess and

verify these impacts, and to look for potential mitigation sites in the appropriate hydrologic basin. This effort is occurring concurrently with the IER planning process in an effort to complete mitigation work and construct mitigation projects expeditiously. As with the planning process of all other IERs, the public will have the opportunity to give input about the proposed work. These mitigation IERs will, as described in Section 1 of this IER, be available for a 30-day public review and comment period.

Relocation of the pipeline would temporarily impact approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche Levee, approximately 12.9 acres of open canal bottom within the Outer Cataouatche Canal, and approximately 14.5 acres of high quality wetlands south of the Lake Cataouatche Levee within the Jean Lafitte National Historical Park and Preserve (table 1). The CEMVN agrees that all impacts occurring within the Jean Lafitte National Historical Park and Preserve would be mitigated for within the National Park.

The access road and staging area near Lake Cataouatche pump stations 1 and 2 would impact approximately 0.29 acres of low quality, non-wet bottomland hardwood habitat (table 1).

A complementary comprehensive mitigation IER will be prepared documenting and compiling these unavoidable impacts and those for all other proposed actions within the HSDRRS that are being analyzed through other IERs. Mitigation planning is being carried out for groups of IERs, rather than within each IER, so that large mitigation efforts could be taken rather than several smaller efforts, increasing the relative economic and ecological benefits of the mitigation effort.

This forthcoming mitigation IER will implement compensatory mitigation as early as possible. All mitigation activities will be consistent with standards and policies established in the Clean Water Act Section 404, and the appropriate CEMVN policies and regulations governing this activity.

## **8. COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS**

Construction of the proposed action would not commence until the proposed action achieves environmental compliance with all applicable laws and regulations, as described below.

Environmental compliance for the proposed action would be achieved upon coordination of this IER with appropriate agencies, organizations, and individuals for their review and comments; USFWS and National Marine Fisheries Service (NMFS) confirmation that the proposed action would not adversely affect any threatened or endangered species or require completion of Endangered Species Act Section 7 consultation; Louisiana Department of Natural Resources (LDNR) concurrence with the determination that the proposed action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program; receipt of a Water Quality Certification from the State of Louisiana; public review of the Section 404(b)(1) Public Notice and signature of the Section 404(b)(1) Evaluation; coordination with the Louisiana State Historic Preservation Officer; receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations; receipt and acceptance or resolution of all LDEQ comments on the air quality impact analysis documented in the IER; and receipt and acceptance or resolution of all Essential Fish Habitat recommendations.

<u>Agency / Organization</u>	<u>Date Responded</u>
Endangered Species Act Section 7 concluded (USFWS):	Jul 9, 2010
Endangered Species Act Section 7 concluded (NMFS):	N/A
Coastal Zone Management Consistency Determination:	TBD (January 19, 2011)
Clean Water Act Section 401 Water Quality Certification:	Jun 23, 2010
USFWS Draft Coordination Act Report:	January 12, 2011
National Historic Preservation Act Sect. 106 (SHPO and/or ACHP):	Feb 22, 2010
Federal tribes with vested interests (that responded):	
Alabama Coushatta Tribe of Texas	May 4, 2010
MPRSA Section 103 Evaluation:	N/A
Clean Air Act:	May 29, 2008
Clean Water Act Section 404(b)(1) signed:	TBD
USFWS Final Coordination act Report:	TBD

## **9. CONCLUSION**

### **9.1 INTERIM DECISION**

The proposed action would require the relocation of an oil/gas pipeline, construction of land and water based access routes to reach the drill entrance and exits points and also the construction of a temporary access road, small staging area and pontoon bridges near the Lake Cataouatche pump stations 1 and 2.

CEMVN has assessed the environmental impacts of the proposed action and has determined that the proposed action would have the following impacts:

#### ***Wetlands/Drainageways/Canals***

- *temporary impacts to approximately 8 acres of intermittently drained, forested wetlands habitat on the protected side, north of the Lake Cataouatche Levee, approximately 12.9 acres of open canal bottom within the Outer Cataouatche Canal, and approximately 14.5 acres of high quality wetlands south of the Lake Cataouatche Levee within the Jean Lafitte National Historical Park and Preserve.*
- *Temporary increase in turbidity associated with open water bottom access wheel wash/dredging and marsh excavation in the Outer Cataouatche canal.*
- *Temporary increase in turbidity associated with canal bottom and bank impacts during construction and use of the pontoon bridges to cross the Avondale and Cataouatche canals.*

***Non-wet bottomland hardwoods***

- *temporary impact to approximately 0.29 of low quality, non-wet bottomland hardwoods.*

***Fisheries***

- *temporary impacts to fisheries within the vicinity of the project area during construction associated with increased turbidity and temporary loss of habitat due to open water bottom access wheel wash/dredging, potential stockpiling marsh excavation, and construction of pontoon bridges.*

***Wildlife***

- *temporary impacts to wildlife within the vicinity of the project area during construction.*

## 9.2 PREPARED BY

The point of contact and responsible manager for the preparation of this IER is Ms Sandra Stiles, CEMVN. The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Regional Planning Environmental Division South, CEMVN-PM; P.O. Box 60267; New Orleans, Louisiana 70160-0267. Table 2 lists the preparers of the various sections and topics in this IER.

<b>IER Section</b>	<b>Team Member</b>
Environmental Team Leader	Sandra Stiles, CEMVN
Environmental Manager	Lissa Lyncker, Evans Graves Eng.
Cultural Resources	Paul Hughbanks, CEMVN
HTRW	Christopher Brown, CEMVN
Technical Editor	Jennifer Darville, CEMVN
Internal Technical Review	Thomas Keevin, CEMVN

## 10. APPENDICES

### Appendix A

#### List of Acronyms and Definitions of Common Terms

ASTM	American Society for Testing and Materials
BFI	Browning-Ferris Industries Landfill
BOD	Biological Oxygen Demand
CED	Comprehensive Environmental Document
CEMVN	Corps of Engineers, Mississippi Valley Division, New Orleans District
CEQ	The President's Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CFS	Cubic Ft Per Second
CW	Civil Works Program
CWA	Clean Water Act
CY	Cubic Yard
CSMA	Consolidated Metropolitan Statistical Area
CZM	Coastal Zone Management
dBA	Decibels
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EM	Engineering Manual
EPW	Evaluation Of Planned Wetlands
ER	Engineering Regulation
FCU	Functional Capacity Units
FCI	Functional Capacity Index
FEMA	Federal Emergency Management Agency
DPR	Detailed Project Report
DPR/EA	Detailed Project Report/Environmental Assessment
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWCA	Fish and Wildlife Coordination Act
GNOHSDRRS	Greater New Orleans Storm Damage Risk Reduction System
HTRW	Hazardous, Toxic, and Radioactive Waste
IER	Individual Environmental Report
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LPV	Lake Ponchartrain and Vicinity
MBTA	Migratory Bird Treaty Act

ML	Milliliters
NAAQS	National Ambient Air Quality Standards
NAVD	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHP	Natural Heritage Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRCS	National Resources Conservation Service
O&M	Operations And Maintenance
OMRR&R	Operations, Maintenance, Repair, Replacement, & Rehabilitation
OSE	Other Social Effects
PA	Programmatic Agreement
PL	Public Law
PS	Pump Station
PSI	Pounds Per Square Inch
P&G	Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RED	Regional Economic Development
ROD	Record of Decision
ROW	Right-of-Way
SCORP	State Comprehensive Outdoor Recreation Plan
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SPH	Standard Project Hurricane
USACE	United States Army Corps Of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish And Wildlife Service
USGS	United States Geological Survey
VOC	Volatile Organic Compounds
WBV	West Bank and Vicinity
WRDA	Water Resources Development Act

**Appendix B**  
**Public Comments**  
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**Appendix C**  
**Interagency Correspondence**

- State Historic Preservation Office
- Alabama-Coushatta Tribe of Texas
- Department of Environmental Quality
- USFWS Threatened and Endangered species consultation
- USFWS Draft Coordination Act Report
- Louisiana Department of Wildlife and Fisheries



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

FEB 22 2010

Regional Planning and  
Environmental Division, South  
New Orleans Environmental Branch

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

*Scott Hutcheson* 4-8-10  
\_\_\_\_\_  
Scott Hutcheson Date  
State Historic Preservation Officer

Mr. Scott Hutcheson  
State Historic Preservation Officer  
Department of Culture, Recreation and Tourism  
Office of Cultural Development  
P.O. Box 44247  
Baton Rouge, Louisiana 70804

**Re: Continuing Consultation, Expanded Area and Finding of no impacts, IER #15 Pipeline Crossings, Jefferson Parish, Louisiana**

Dear Mr. Hutcheson:

The U.S. Army Corps of Engineers, New Orleans District (The Corps) is preparing to improve the Lake Cataouatche Segment of the West Bank and Vicinity Hurricane Protection Levee in Jefferson Parish, Louisiana. The majority of this proposed work, as IER #15, was discussed in a Management Summary prepared by Coastal Environments, Inc. (CEI) and was agreed by your office to have no impact to cultural resources in a letter dated December 11, 2007. There is now additional Right-of-Way (ROW) and Area of Potential Effect (APE) adjacent to the proposed levee footprint, required by directional drilling for the relocation of a Chevron pipeline in Segment WBV-15a.2. The landside portion of this expanded APE falls within the originally considered ROW to be studied and was considered a low potential area for cultural resources. The floodside of the original ROW was delineated for distributaries and soils that may indicate a high potential for cultural resources, and none of these high potential areas intersect with the additional APE required by the pipeline relocation. A map of the pipeline relocation is enclosed for your consideration.

Based upon the findings of areas for low and high potential as discussed in the Management Summary, and that the landside additional APE was investigated as part of the Management Summary, and that the floodside additional APE does not intersect a past distributary or other high-potential area for cultural resources, the Corps concludes that use of the expanded APE will have no effect on cultural resources. We ask that you provide comments to this conclusion within 30 days. Please contact Dr. Paul Hughbanks at (504) 862-1100 if you have any questions.

Sincerely,

*Joan M. Exnicios*

Joan M. Exnicios  
Chief, New Orleans Environmental Branch

MAR - 8 2010

Enclosure



# ALABAMA-COUSHATTA TRIBE OF TEXAS

571 State Park Rd 56 • Livingston, Texas 77351 • (936) 563-1100

May 4, 2010

Paul Hughbanks  
New Orleans District, Corps of Engineers  
Attn: CEMVN-PM-R  
P.O. Box 60267  
New Orleans, LA 70160-0267

Dear Dr. Hughbanks:

On behalf of Mikko Oscola Clayton Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your efforts to consult us regarding IER #15 Pipeline Crossing, Expanded APE in Jefferson Parish.

Our Tribe maintains ancestral associations within Louisiana despite the absence of written records to completely identify Tribal activities, villages, trails, or grave sites. However, it is our objective to ensure significances of Native American ancestry, especially of the Alabama-Coushatta Tribe, are administered with the utmost attention.

Upon review of your April 12, 2010 submission, no known impacts to religious, cultural, or historical assets of the Alabama-Coushatta Tribe of Texas are anticipated in conjunction with this proposal. In the event of inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including our office, notified without delay.

Should you require additional assistance, please do not hesitate to contact us.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "B. Celestine", is written over a horizontal line.

Bryant J. Celestine  
Historic Preservation Officer

BOBBY JINDAL  
GOVERNOR



PEGGY M. HATCH  
SECRETARY

**State of Louisiana**  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
ENVIRONMENTAL SERVICES

JUN 23 2010

U.S. Army Corps of Engineers- New Orleans District  
CEMVN-PM-RS  
P.O. Box 60267  
New Orleans, LA 70160-0267

Attention: Sandra Stiles

RE: Water Quality Certification (WQC 080213-05/AI 156034/CER 20100001)  
Corps of Engineers Individual Environmental Report (IER #15)  
Jefferson Parish

Dear Ms. Stiles:

The Department has reviewed your revised application for a Corps of Engineers permit for the construction of the Lake Cataouatche Levee in Jefferson Parish. This revision concerns the additional relocation of utility pipelines.

The requirements for Water Quality Certification have been met in accordance with LAC 33:IX.1507.A-E. Based on the information provided in your application, we have determined that the placement of the fill material will not violate the water quality standards of Louisiana provided for under LAC 33:IX.Chapter 11. Therefore, the Department has issued a Water Quality Certification.

Sincerely,

A handwritten signature in black ink, appearing to read "Melvin C. Mitchell", written over a horizontal line.

Melvin C. Mitchell  
Administrator  
Water Permits Division

MCM/jjp



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.

Suite 400

Lafayette, Louisiana 70506

July 9, 2010

Ms. Joan Exnicios  
Chief, Environmental Planning and Compliance Branch  
U.S. Army Corps of Engineers  
Post Office Box 60267  
New Orleans, Louisiana 70160-0267

Dear Ms. Exnicios:

The Fish and Wildlife Service (Service) has reviewed the information provided in the June 21, 2010, letter regarding the oil/gas pipeline relocation necessary because of flood protection improvements to the West Bank and Vicinity, Lake Cataouatche Levee, Jefferson Parish, Louisiana. We offer the following comments under the authority of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The Service concurs with your "not likely to adversely affect" determination because we have record of any threatened or endangered species in the project area. However, if the scope or design of the project changes or the project is not implemented within one year from the date of this letter, the Service requests that coordination be reestablished to ensure that the above concurrence is still valid.

The floodside of the proposed project area is within the Jean Lafitte National and Historical Park and Preserve boundary. The U.S. Army Corps of Engineers (Corps) should avoid impacts to public lands, if feasible. If not feasible the Corps should establish and continue coordination with agencies managing public lands that may be impacted by a project feature until construction of that feature is complete and prior to any subsequent maintenance. Therefore impacts to the floodside should be avoided, if feasible. For additional information please contact Mr. David Muth, the Chief of Resource Management (504) 589-3882 extension 128, ([david\\_muth@nps.gov](mailto:david_muth@nps.gov))

We appreciate the opportunity to assist the Corps in complying with applicable provisions of the Endangered Species Act. If you or your staff have further questions regarding the above letter, please contact David Walther of this office at (337) 291-3122.

Sincerely,

James F. Boggs  
Supervisor  
Louisiana Field Office

cc: Jean Lafitte National Historical Park and Preserve, New Orleans, LA  
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
646 Cajundome Blvd.  
Suite 400  
Lafayette, Louisiana 70506  
January 12, 2011

Colonel Edward R. Fleming  
District Commander  
U.S. Army Corps of Engineers  
Post Office Box 60267  
New Orleans, Louisiana 70160-0267

Dear Colonel Fleming:

Please reference the second supplement of Individual Environmental Report (IER) 15 (i.e., IERS 15a) for the Lake Cataouatche Levee, Jefferson Parish, Louisiana. That IERS is being prepared under the approval of the Council on Environmental Quality (CEQ) to obtain compliance with the National Environmental Policy Act of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321-4347) and is authorized Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4), and Public Law 110-28, U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (5th Supplemental). Those laws authorized the Corps of Engineers (Corps) to upgrade two existing hurricane protection projects (i.e., Westbank and Vicinity of New Orleans and Lake Pontchartrain and Vicinity) in the Greater New Orleans area in southeast Louisiana to provide 100-year hurricane protection. This draft report provides recommendations to minimize project impacts to fish and wildlife resources.

The U.S. Fish and Wildlife Service (Service) provided to the Corps a November 26, 2007, Draft Programmatic Fish and Wildlife Coordination Act (FWCA; 48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) report that addresses the hurricane protection improvements authorized in Supplemental 4 and a March 17, 2008, a March 24, 2008, and a January 11, 2010, FWCA reports that provided recommendations on the originally proposed IER 15 alternatives and subsequent changes, respectively. Since those reports the Corps has revised the alternatives and the selected plan for structural flood protection. This letter supplements our previous reports and addresses the change the selected plan and provides an additional recommendation to reduce impacts to public lands. However, this report does not constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA. This report has been provided to the Louisiana Department of Wildlife and Fisheries and the National Marine Fisheries Service; their comments will be incorporated into our final report.

The study area is located in the eastern portion of Jefferson Parish within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. Higher elevations occur on the natural levees of the Mississippi River and its distributaries. Developed lands are primarily associated with natural levees, but extensive wetlands have been leveed and drained to accommodate

**TAKE PRIDE  
IN AMERICA** 

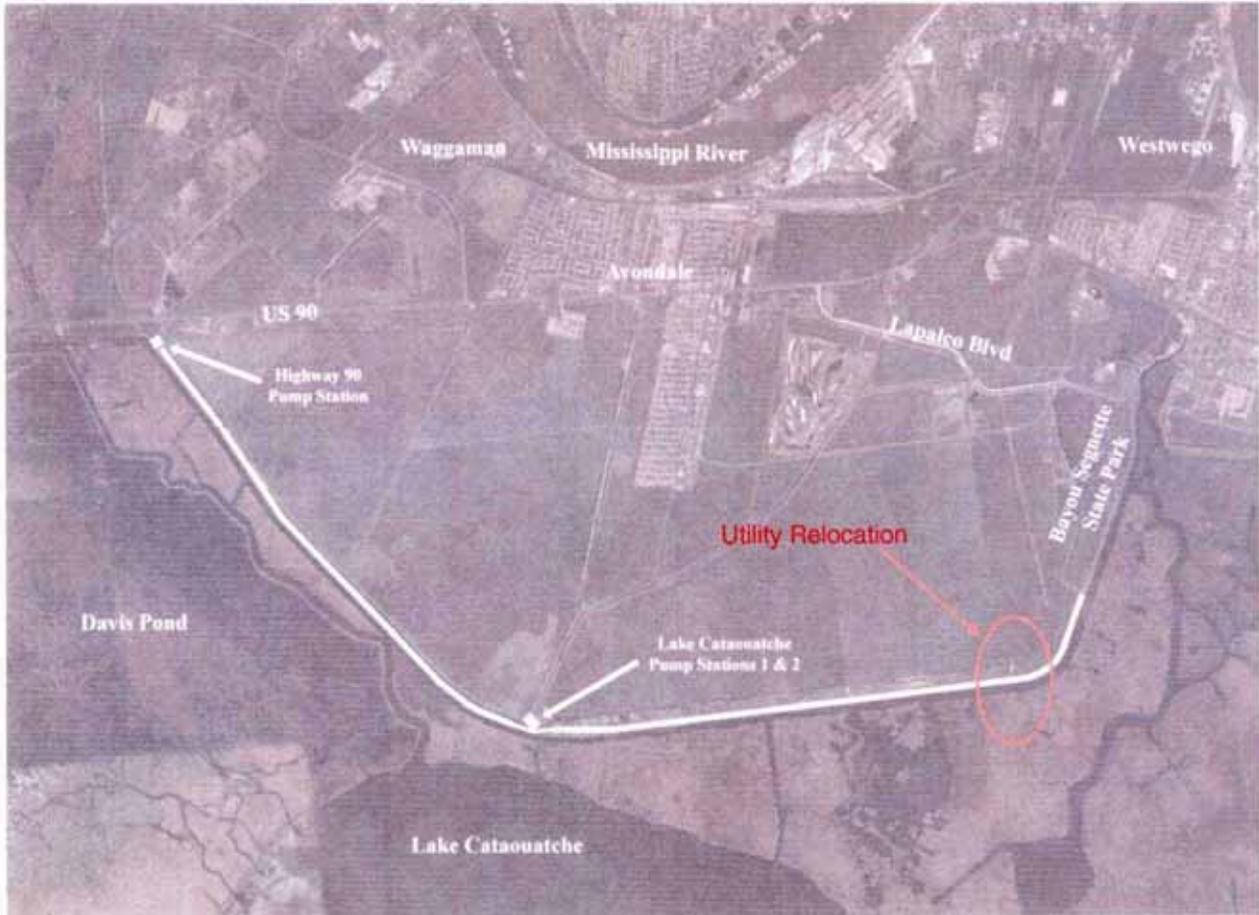
residential, commercial, and agricultural development. Federal, State, and local levees have been constructed for flood protection purposes, often with negative effects on adjacent wetlands. The Mississippi River and Lake Cataouatche are prominent landscape features, as are extensive oil and gas industry access channels and pipeline canals. Extensive wetlands and associated shallow open waters dominate the landscape outside the flood control levees.

Habitat types in the project area include forested wetlands (i.e., bottomland hardwoods in varying successional stages), non-wet bottomland hardwoods, marsh, open water, and developed areas. Due to development and a forced-drainage system, the hydrology of most of the forested habitat within the levee system has been altered. The forced-drainage system has been in operation for many years, and subsidence is evident throughout the areas enclosed by levees.

As previously mentioned, the Service has provided FWCA Reports for the authorized hurricane protection project. Those reports contain a thorough discussion of the significant fish and wildlife resources (including habitats) that occur within the study area. For brevity, that discussion is incorporated by reference herein but the following information is provided to supplement the previously mentioned reports and provide specific recommendations regarding the new alternatives and selected plan.

The proposed plan for IER 15 involves upgrading the existing flood protection levees and floodwalls around the Lake Cataouatche Basin. This project originates where the U.S. Highway 90 embankment ties into the existing hurricane protection levee and continues eastward along the existing levee to approximately the Bayou Segnette State Park boundary. The project is designed to use existing rights-of-way (ROW) and levees within previously disturbed areas, thereby minimizing environmental impacts. The existing Lake Cataouatche Levee alignment is divided into three distinct reaches as described in our previous report, however, the additional proposed work, utility relocation, is located within Reach 2. Reach 2 extends from the BFI Landfill to the Bayou Segnette State Park Boundary (Figure 1). This reach is comprised of two sections that are separated by the Lake Cataouatche Pump Stations. Reach 2 originates at the southern end of Reach 1 and proceeds approximately 15,152 ft to the Lake Cataouatche Pump Stations No. 1 and No. 2. Excepting approximately 1,450 ft around the pump stations, Reach 2 continues an additional 20,950 ft to the Bayou Segnette State Park boundary (see figure 3). Including both sections, this reach is approximately 6.84 miles in length.

Figure 1. IER 15 Reaches and Utility Relocation



The proposed project feature (i.e., pipeline relocation) addressed by this report is located in Reach 2. The pipeline relocation begins along the northern boundary of the interior borrow canal and extends across the levee and the Outer Cataouatche Canal into floodside wetlands on the southern shore of that canal. Those fresh marsh wetlands are within the Jean Lafitte National Historical Park and Preserve (JLNHPP). The pipeline is currently laid on the surface of the existing levee crown and slope (up and over configuration). To upgrade the levee under the pipeline, that pipeline must be relocated.

The oil/gas pipeline relocation would temporarily impact approximately 8 acres of low quality bottomland hardwoods on the protected side, 12.9 acres of open water, and 14.5 acres of high quality fresh marsh on the floodside. While the project area on the floodside includes tidally influenced, higher quality freshwater wetlands, forested habitat on the protected side has been previously disturbed. The remaining wooded areas possess some characteristics of wetlands; however, due to pumped drainage the amount and quality of those wetlands has diminished over time. The bottomland hardwoods remaining in the project area have a low quality value because of the excessive quantity of invasive Chinese tallow-trees.

As currently proposed the pipeline would be relocated via horizontal directional drilling (HDD). Typically, this method reduces impacts to fish and wildlife resources; however, compared to impacts associated with construction of a concrete floodwall (e.g., T-wall) with a sleeve through which the pipeline passes, the HDD may result in avoidable impacts to JLNHPP. All feasible alternatives that would reduce impacts to the JLNHPP should be investigated to ensure impacts to public lands are avoided or minimized. The results of that investigation should be presented in the IERS. To further reduce impacts to the JLNHPP all excavated material within the freshwater marshes should be used to backfill the proposed dredged channels. Dredged material used to backfill should be replaced to the approximate same elevation as the adjacent marshes. Replanting of the disturbed site should be conducted according to JLNHPP specifications, if requested.

As previously mentioned, the floodside of the proposed project feature is within the JLNHPP boundary. The Corps should avoid impacts to public lands, if feasible. If not feasible the Corps should establish and continue coordination with the National Park Service (NPS) until construction of that feature is complete and prior to any subsequent maintenance. Impacts to NPS lands should be mitigated on adjacent NPS lands within the vicinity of IER 15Sa, if feasible. For additional information please contact Ms. Carol A. Clark, Superintendent of JLNHPP (504) 589-3882 extension 111.

Impacts to habitat will be quantified by habitat quality (i.e., average annual habitat unit or AAHUs). The Service proposes to use the Wetland Value Assessment (WVA) to quantify the impacts of proposed flood protection feature in our final report.

## SERVICE POSITION AND RECOMMENDATIONS

The Service still does not object to the proposed project provided that additional recommendations provided below are addressed by the Corps and incorporated into project plans, when feasible:

1. All feasible alternatives to HDD that would reduce impacts to the JLNHPP should be investigated to ensure impacts to public lands are avoided or minimized. The results of that investigation should be presented in the IERS.
2. To the greatest extent possible, situate flood protection features so that destruction of wetlands and non-wet bottomland hardwoods are avoided or minimized.
3. Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.
4. Further detailed planning of project features (e.g., Design Documentation Report, Engineering Documentation Report, Plans and Specifications, or other similar documents) should be coordinated with the Service, NMFS, LDWF, Environmental Protection Agency (EPA), JLNHPP, and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.
5. The U.S. Army Corps of Engineers (Corps) should avoid impacts NPS lands, if feasible. If not feasible the Corps should establish and continue coordination with NPS staff until construction of that feature is complete and prior to any subsequent maintenance. Unavoidable impacts, when permissible by that agency, should be minimized and appropriately mitigated on NPS lands.
6. If a proposed project feature is changed significantly or is not implemented within one year of the date of our Endangered Species Act consultation letter, we recommend that the Corps reinitiate coordination with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.
7. The Corps shall fully compensate for any unavoidable losses of wetland habitat or non-wet bottomland hardwoods caused by project features.
8. To further reduce impacts to the JLNHPP all excavated material within the freshwater marshes should be used to backfill the proposed dredged channel. No disposed excavated material should remain above the marsh surface. Dredged material used to backfill should be replaced to the approximate same elevation as the adjacent marshes. Replanting of the disturbed site should be conducted according to JLNHPP specifications, if requested.
9. Acquisition, habitat development, maintenance and management of mitigation lands should be allocated as first-cost expenses of the project, and the local project-sponsor should be responsible for operational costs. If the local project-sponsor is unable to fulfill the financial mitigation requirements for operation, then the Corps should provide the necessary funding to

ensure mitigation obligations are met on behalf of the public interest.

10. Any proposed change in mitigation features or plans should be coordinated in advance with the Service, JLNHPP, NMFS, LDWF, EPA and LDNR.

Should you or your staff have any questions regarding this letter and our attached report, please contact David Walther (337/291-3122) of this office.

Sincerely,

James F. Boggs  
Supervisor  
Louisiana Field Office

cc: Jean Lafitte National Historical Park and Preserve, New Orleans, LA  
National Marine Fisheries Service, Baton Rouge, LA  
EPA, Dallas, TX  
LA Dept. of Wildlife and Fisheries, Baton Rouge, LA  
LA Dept. of Natural Resources, CMD, Baton Rouge, LA  
LA Dept. of Natural Resources, CRD, Baton Rouge, LA



BOBBY JINDAL  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE & FISHERIES

ROBERT J. BARHAM  
SECRETARY

January 11, 2011

Gregory J. Ducote, Administrator  
Louisiana Department of Natural Resources  
Office of Coastal Management  
P.O. Box 44487  
Baton Rouge, LA 70804-4487

RE: *Consistency Number: C200080029 (Modified)*  
*Applicant: U.S. Army Corps of Engineers - New Orleans District*  
*Notice Date: January 11, 2011*

Dear Mr. Ducote:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the public notice referenced above. The following recommendations have been provided by the appropriate biologist(s):

**Ecological Studies:**

The Corps of Engineers – New Orleans District (COE) shall implement adequate erosion / sediment control measures to insure that no sediments or other activity related debris are allowed to enter wetland areas located adjacent to construction areas. Accepted measures include the proper use of vegetated buffers, silt fences or other Environmental Protection Agency construction site stormwater runoff control best management practices.

The COE shall use clean fill material during construction of temporary access roads in wetland areas. Upon abandonment, the affected areas shall be restored to pre-project conditions.

One 24 inch culvert shall be installed every 250 feet when constructing access roads through wetlands. Culverts should be maintained to ensure that existing flow of surface water is uncompromised.

All forested vegetation cleared during construction activities is to be removed and hauled offsite to a non-wetland disposal location, or chipped and spread on site in a manner that is beneficial to the surrounding environment (i.e., placed in thin layers not to exceed 4 inches).

The COE shall develop a mitigation plan designed to off-set impacts to fish and wildlife resources. The mitigation plan shall be approved by the resource and regulatory agencies. Mitigation should occur simultaneously with construction activities in order to ensure that all necessary mitigation is carried out.

The Louisiana Department of Wildlife and Fisheries appreciates the opportunity to review and provide recommendations to you regarding this proposed activity. Please do not hesitate to contact LDWF Permits Coordinator Dave Butler at 225-763-3595 should you need further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kyle F. Balkum', with a horizontal line extending to the right.

Kyle F. Balkum  
Biologist Program Manager

cd

c: Chris Davis: Biologist  
EPA Marine & Wetlands Section  
USFWS Ecological Services  
LDEQ, Water Quality Certification Section