

**DRAFT INDIVIDUAL ENVIRONMENTAL REPORT  
SUPPLEMENTAL**

**WEST BANK AND VICINITY**

**HERO CANAL LEVEE AND EASTERN TIE-IN**

**PLAQUEMINES PARISH, LOUISIANA**

**SUPPLEMENTAL IER #13a**

**TEMPORARY CLOSURE OF HERO CANAL**

**(IERS 13a)**



**US Army Corps  
of Engineers®**

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## 1.0 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), has prepared this draft Supplemental Individual Environmental Report #13a (draft IERS # 13a) to evaluate the potential impacts associated with the proposed project modification to the original IER #13 project West Bank and Vicinity (WBV), Hero Canal Levee and Eastern Tie-in area. IERS #13a contains a modification to the original plan which includes the potential closing of the Hero Canal for a maximum of approximately 60 days and a minimum of approximately 30 days within a 90 day time frame. The proposed action is located in Plaquemines Parish near New Orleans, Louisiana.

IERS #13a has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's (CEQ) Regulations (40 CFR §1500-1508), as reflected in the USACE Engineering Regulation, ER 200-2-2. The execution of alternative arrangements, in lieu of the traditional Environmental Assessment or Environmental Impact Statement, is provided for in ER 200-2-2, Environmental Quality (33 CFR §230) and pursuant to the CEQ NEPA Implementation Regulations (40 CFR §1506.11). The alternative arrangements can be found at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov), and are herein incorporated by reference.

The CEMVN implemented Alternative Arrangements on March 13, 2007, under the provisions of the CEQ Regulations for Implementing the NEPA (40 CFR §1506.11). This process was implemented in order to expeditiously complete environmental analysis for any changes to the authorized system and the 100-year level of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), formerly known as the Hurricane Protection System (HPS), authorized and funded by Congress and the Administration. The term "100-year level of risk reduction," 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 experiences by a 1 percent chance each year. The proposed actions are located in southeastern Louisiana and are part of the Federal effort to rebuild and complete construction of the HSDRRS in the New Orleans Metropolitan area as a result of Hurricanes Katrina and Rita.

On December 4, 2009, the CEMVN Commander signed the Decision Record for IER #13 and the Addendum to IER #13. IER #13 is incorporated by reference into this supplemental document (appendix E). Copies of the documents and other supporting information are available upon request or at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov).

### 1.1 PRIOR REPORTS

A number of studies and reports in the proposed project area have been prepared by the USACE, other Federal, state and local agencies, research institutions, and individuals. Pertinent studies, reports and projects are discussed below. Other relevant reports are listed in IER #13 and are incorporated herein by reference.

#### **West Bank and Vicinity Relevant Reports:**

- On February 22, 2011, the CEMVN Commander signed a Decision Record on the IER Supplemental #12.a entitled "GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana". The document was prepared to evaluate the potential impacts associated with the construction of an access road, the use of a pontoon bridge in the V-Line Levee Canal and the placement of rip rap along an 800 foot length of the V-Line Levee Canal.

- On February 2, 2011, the CEMVN Commander signed a Decision Record on the IERS #12/13 Waterline entitled “GIWW, Harvey and Algiers Levees and Floodwalls/ Hero Canal Levee and Eastern Tie-In, Plaquemines Parish, Supplemental IER #12/13 Waterline”. The document was prepared to evaluate the potential impacts associated with the installation of 16,000 linear ft of waterline to provide water for the operations and maintenance of the West Closure Complex (WCC).
- On November 20, 2010, the CEMVN Commander signed a Decision Record on the Addendum to draft IER Supplemental #12 entitled “GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana”. The document was prepared to evaluate the potential impacts associated with the temporary closure of the Belle Chase Tunnel.
- From September 3, 2010 to October 2, 2010 the CEMVN released for public review a draft IER Supplemental #12 entitled “GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana”. The document was prepared to evaluate the potential impacts associated with the use of the Site N borrow site for disposal. During the public review time frame some modifications were made resulting in the preparation on an Addendum to the report, which also was released for a 30-day public comment period.
- On February 3, 2009, the CEMVN Commander signed a Decision Record on IER #25 entitled “Government Furnished Borrow Material, Orleans, Plaquemines and Jefferson Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On January 21, 2009, the CEMVN Commander signed a Decision Record on IER #17, entitled “Company Canal Floodwall, Jefferson Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On December 4, 2009, the CEMVN Commander signed a Decision Record on IER #13, entitled “Hero Canal Levee and Eastern Tie-In, Plaquemines Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On February 18, 2009, the CEMVN Commander signed a Decision Record on IER #12, entitled “Gulf Intracoastal Waterway (GIWW), Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On October, 20 2008, the CEMVN 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 impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- On August 26, 2008, the CEMVN 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 along the WBV, Westwego to Harvey Levee project area.

- On June 12, 2008, the CEMVN Commander signed a Decision Record on IER #15, entitled “Lake Cataouatche Levee, Jefferson Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On May 30, 2008, the CEMVN 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 impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On May 6, 2008, the CEMVN 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 impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- On February 21, 2008, the CEMVN Commander signed a Decision Record on IER #18 entitled “Government Furnished Borrow Material, Jefferson, Orleans, Plaquemines, St. Charles, and St. Bernard Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On February 14, 2008, the CEMVN Commander signed a Decision Record on IER #19 entitled “Pre-Approved Contractor Furnished Borrow Material, Jefferson, Orleans, St. Bernard, Iberville, and Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- In July 2006, the CEMVN Commander signed a Finding of No Significant Impact (FONSI) on EA #433 entitled, “USACE Response to Hurricanes Katrina & Rita in Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of Hurricanes Katrina and Rita.
- On August 23, 2005, the CEMVN Commander signed a FONSI on EA #422 entitled “Mississippi River Levees – West Bank Gaps, Concrete Slope Pavement Borrow Area Designation, St. Charles and Jefferson Parishes, Louisiana.” The report investigates the impacts of obtaining borrow material from various areas in Louisiana.
- On February 22, 2005, the CEMVN Commander signed a FONSI on EA #306A entitled “West Bank Hurricane Protection Project – East of the Harvey Canal, Floodwall Realignment and Change in Method of Sector Gate.” The report discusses the impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the LPV Project.
- On May 5, 2003, the CEMVN Commander signed a FONSI on EA #337 entitled “Algiers Canal Alternative Borrow Site.”
- On June 19, 2003, the CEMVN Commander signed a FONSI on EA #373 entitled “Lake Cataouatche Levee Enlargement.” The report discusses the impacts related to improvements to a levee from Bayou Segnette State Park to Lake Cataouatche.

- On May 16, 2002, the CEMVN Commander signed a FONSI on EA #306 entitled “West Bank Hurricane Protection Project - Harvey Canal Sector Gate Site Relocation and Construction Method Change.” The report discusses the impacts related to the relocation of a proposed sector gate within the Harvey Canal, as authorized by the LPV Project.
- On August 30, 2000, the CEMVN Commander signed a FONSI on EA #320 entitled “West Bank Hurricane Protection Features.” The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Project.
- On August 18, 1998, the CEMVN Commander signed a FONSI on EA #258 entitled “Mississippi River Levee Maintenance - Plaquemines West Bank Second Lift, Fort Jackson Borrow Site.”
- The final EIS for the WBV, East of Harvey Canal, Hurricane Protection Project was completed in August 1994. A Record of Decision (ROD) was signed by the CEMVN Commander in September 1998.
- The final EIS for the WBV, Lake Cataouatche, Hurricane Protection Project was completed. A ROD was signed by the CEMVN Commander in September 1998.
- In December 1996, the USACE completed a post-authorization change study entitled, “Westwego to Harvey Canal, Louisiana Hurricane Protection Project Lake Cataouatche Area, EIS.” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between Bayou Segnette and the St. Charles Parish line. A Standard Project Hurricane (SPH) level of risk reduction was recommended along the alignment followed by the existing non-Federal levee. The project was authorized by Section 101 (b) of the WRDA of 1996 (P.L. 104-303) subject to the completion of a final report of the Chief of Engineers, which was signed on 23 December 1996.
- On January 12, 1994, the CEMVN Commander signed a FONSI on EA #198 entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, LA, Hurricane Protection Project, Westwego to Harvey Canal, Jefferson Parish, Louisiana, Proposed Alternate Borrow Sources and Construction Options.” The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Levee.
- In August 1994, the CEMVN completed a feasibility report entitled “WBV (East of the Harvey Canal).” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of metropolitan New Orleans from the Harvey Canal eastwards to the Mississippi River. The final report recommends that the existing West Bank Hurricane Project, Jefferson Parish, Louisiana, authorized by the WRDA of 1986 (P.L. 99-662), approved November 17, 1986, be modified to provide additional hurricane protection east of the Harvey Canal. The report also recommends that the level of risk reduction for the area east of the Algiers Canal deviate from the National Economic Development Plan’s level of risk reduction and provide protection for the SPH. The Division Engineer’s Notice was issued on September 1, 1994. The Chief of Engineer’s report was issued on 1 May 1995. Preconstruction, engineering, and design was initiated in late 1994 and is continuing. The WRDA of 1996 authorized the project.
- On March 20, 1992, the CEMVN Commander signed a FONSI on EA #165 entitled “Westwego to Harvey Canal Disposal Site.”

- In February 1992, the USACE completed a reconnaissance study entitled “West Bank Hurricane Protection, Lake Cataouatche, Louisiana.” The study investigated the feasibility of providing hurricane and storm damage risk reduction to that portion of the west bank of the Mississippi River in Jefferson Parish, between Bayou Segnette and the St. Charles Parish line. The study found a 100-year level of risk reduction to be economically justified based on constructing a combination levee/ sheetpile wall along the alignment followed by the existing non-Federal levee. Due to potential impacts to the Westwego to Harvey Canal project, the study is proceeding as a post-authorization change.
- On June 3, 1991, the CEMVN Commander signed a FONSI on EA #136 entitled “West Bank Additional Borrow Site between Hwy 45 and Estelle PS.”
- On March 15, 1990, the CEMVN Commander signed a FONSI on EA #121 entitled “West Bank Westwego to Harvey Changes to EIS.” The report addresses the impacts associated with the use of borrow material from Fort Jackson for LPV construction. The material was used for constructing the second lift for the Plaquemines West Bank levee upgrade, as part of LPV construction.
- SIR #29 entitled “LPV Hurricane Protection – South Point to GIWW Levee Enlargement” was signed by the CEMVN Commander on June 12, 1987. The report discusses the impacts associated with the enlargement of the GIWW.
- In December 1986, the USACE completed a Feasibility Report and EIS entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, LA.” The report investigates the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between the Harvey Canal and Westwego, and down to the vicinity of Crown Point, Louisiana. The report recommends implementing a plan that would provide SPH level of risk reduction to an area on the west bank between Westwego and the Harvey Canal north of Crown Point. The project was authorized by the WRDA of 1986 (P.L. 99-662). Construction of the project was initiated in early 1991.

On October 16, 1985, the Environmental Protection Agency (EPA) signed a Final Determination concerning the Bayou aux Carpes Site in Jefferson Parish pursuant to Section 404(c) of the Clean Water Act (CWA). The authority for this determination was given to the Administrator of the EPA under the CWA (33 USC, 1251 et eq).

## **2.0 ALTERNATIVES**

### **2.1 DESCRIPTION OF THE ALTERNATIVES**

#### **No Action**

Under the no action alternative, the Government-approved action, as described in IER #13, would be constructed. IER #13 is incorporated by reference into this supplemental document (appendix E).

#### **Proposed Action**

The proposed action consists of closing the Hero Canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days in order to ensure availability of 100-year level of risk reduction by the beginning of the 2011 hurricane season in June. Closure of the canal could begin as early as April 15, 2011 or as late as May 15, 2011 and could end as late as July 15, 2011. In IER #13, the proposed action for construction of the stoplog structure within Hero Canal stated "During construction the stoplog closure would be built in phases, allowing continuous passage of vessels in the canal." However, in order to provide 1% level of risk reduction by the 2011 hurricane season, the completion of the stoplog structure would need to proceed simultaneously with the construction of a floodwall across the portion of the canal now serving as a by-pass channel. While the floodwall is constructed, a Temporary Retaining Structure (TRS) would be in place to allow construction in the dry as well as to provide 1% risk reduction during floodwall construction. The only change to the action discussed in IER #13 would be the complete closure of the Hero Canal to accommodate compaction of the construction schedule and simultaneous fitting of the stoplogs within the stoplog structure and construction of the adjacent floodwall across Hero Canal. No additional footprint or design elements have been identified for the IERS #13a proposed action.

The stoplog closure structure is in the final stages of construction, but will require fitting of the stoplogs that must be performed in the dry. It is estimated that the fitting of the stoplogs could require a maximum of 30 days to complete. The original plans allowed time to complete the stoplog closure structure, including the fitting of the stoplogs, before redirecting canal traffic from the temporary bypass channel to pass through the completed closure structure then construct a floodwall across the portion of the canal that had served as the temporary by-pass. To avert the risk of flooding once the 2011 hurricane season begins, the bypass channel closure would begin as early as April 15, 2011 and the bypass channel TRS would serve as temporary flood risk reduction to hinder flood waters from entering the Hero Canal until construction of the floodwall is complete.

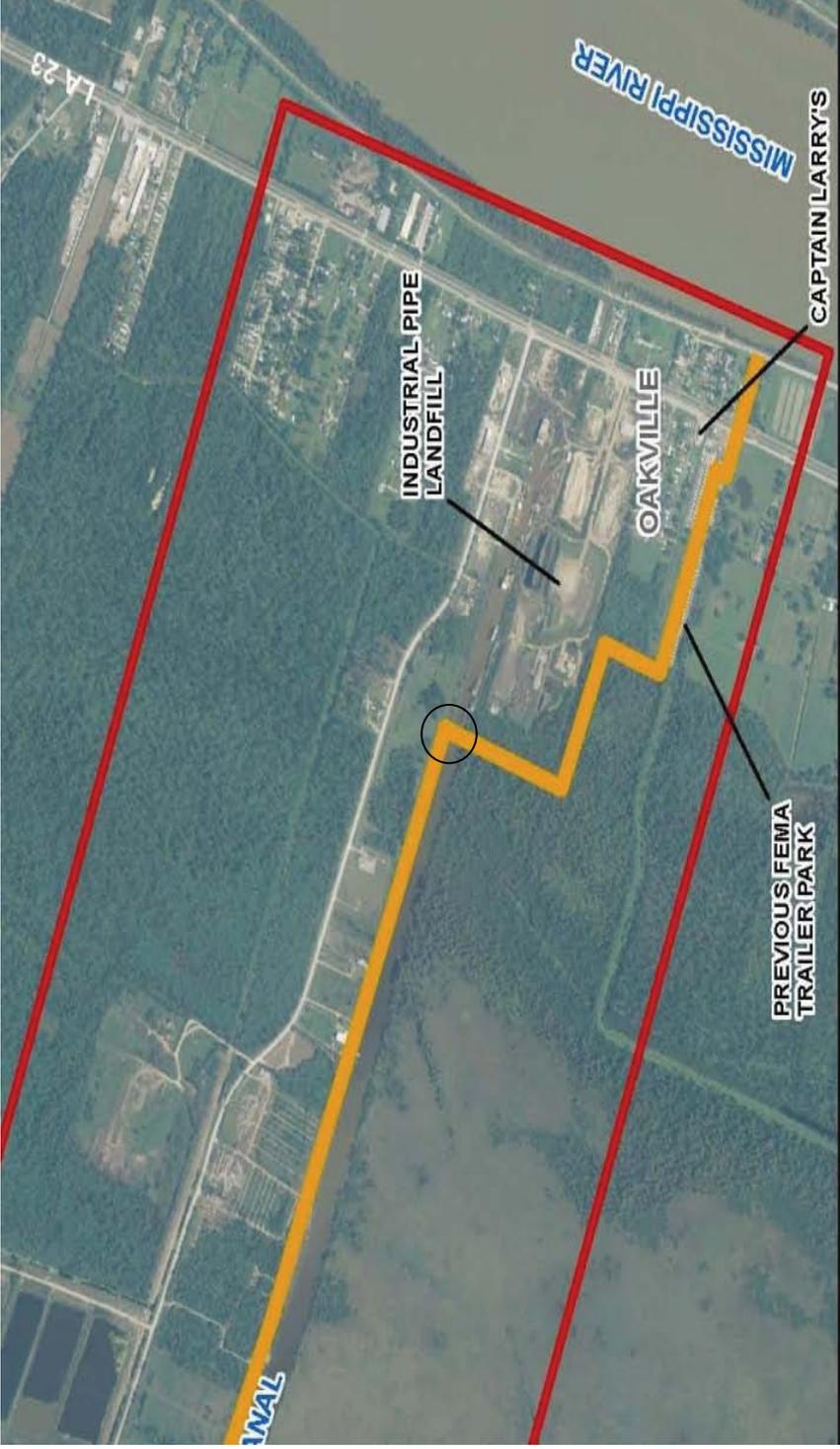


Figure 1: IERS #13a project location

## **3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **3.1 ENVIRONMENTAL SETTING**

IER #13 contains a complete discussion of the environmental setting for the project area and is incorporated by reference (appendix E). As such, no discussion of environmental setting is 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, indirectly or cumulatively by the alternatives. Direct impacts are those that are caused by the action and occur at the same time and place (40 CFR §1508.8(a)). Indirect impacts are those that are caused by the action and occur later in time or further removed in distance, but are still reasonably foreseeable (40 CFR §1508.8(b)). Cumulative impacts are those which result 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. Cumulative impacts are also discussed in section 4.

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of Federal, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Further detail on the significance of each of these resources can be found by contacting the 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 web site’s digital library for additional information. Table 1 shows those significant resources found within the project area, and notes whether they would be impacted by the proposed action analyzed in this IERS.

Existing conditions for significant resources were discussed in IER #13 and are incorporated by reference (appendix E). Discussion of impacts is provided only for those resources that are affected by the proposed project modification. All other resource impacts remain the same as described in IER #13.

**Table 1  
Significant Resources in Project Study Area**

<b>Significant Resource</b>	<b>Impacted</b>	<b>Not Impacted</b>
Air Quality		X
Water Quality		X
Upland Resources		X
Aquatic Habitat		X
Fish and Wildlife		X
Wetlands		X
Threatened and Endangered Species		X
Recreational Resources		X
Aesthetic Resources		X
Cultural Resources		X
Farmland		X
Environmental Justice		X
Socioeconomics	X	
HTRW		X

The following resources would not be affected by the proposed action: air quality, water quality, upland/non-wetland, aquatic, fish and wildlife, wetlands, threatened and endangered species, aesthetic resources, recreational resources, cultural resources, farmland, noise, environmental justice, and HTRW. Discussions regarding the impacts to these resources can be found in IER #13, which is incorporated by reference (appendix E).

### **3.3 SOCIOECONOMICS**

#### **3.3.1 Impacts to Employment, Business, and Industry**

##### No Action

##### *Direct, Indirect and Cumulative Impacts*

Without implementation of the proposed action, the originally selected plan, as discussed in IER #13 would be constructed. Consequently, direct, indirect, and cumulative impacts on employment, business and industry would not differ from those described in IER #13.

##### Proposed Action

##### *Direct, indirect and cumulative impacts:*

IER #13 states: “During construction, the stop-log closure would be built in phases, allowing continuous passage of vessels in the canal.” However, it will now be necessary to close the canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days of consecutive or intermittent closures over a 90 day period in order to meet the one percent level of risk reduction by the 2011 hurricane season beginning in June. Six businesses operating on the Hero Canal have been identified as being potentially affected by the possible closure. Phone interviews were attempted with each to ascertain the likely impact the closure would have on the businesses; only half of the businesses responded. All are predominantly involved in marine

salvage and/or recycling activities, collectively employing over 100 workers. Each of the businesses relies heavily on canal access via barge which, according to those interviewed, comprised as much as 50 to 90 percent of their total operations. An alternate mode of transport, such as rail, is not available and transport by truck was not viewed as possible due to the size of the materials being transported.

Responses from the interviews ranged from no anticipated need to shutdown their operations or layoff employees to potentially a substantial part of their operations being shut down with several of their employees having to be laid off. In general, the major fear expressed by the companies interviewed is that several of their current customers would go elsewhere in the short-run and potentially stay away in the long-run thereby making the detrimental effect on their business much longer than the possible 2-month closure. Consequently, interviews with the companies indicated that the proposed closure of the canal for as much as 60 days would likely cause a serious detrimental economic impact that may continue beyond the construction period.

### **3.3.2 Effects on Transportation**

#### No Action

##### *Direct, Indirect and Cumulative Impacts*

Without implementation of the proposed action, the originally selected plan, as discussed in IER #13 would be constructed. Consequently, direct, indirect, and cumulative impacts on transportation would not differ from those described in IER #13.

#### Proposed Action

##### *Direct, Indirect and Cumulative Impacts:*

IER #13 states: “During construction, the stop-log closure would be built in phases, allowing continuous passage of vessels in the canal.” However, it may now be necessary to close the canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days of consecutive or intermittent closures over a 90 day period in order to meet the one percent level of risk reduction by the beginning of the 2011 hurricane season in June..

Coordination with the U.S. Coast Guard New Orleans Sector, Waterways Management Division regarding the proposed action to temporarily close Hero Canal to vessel traffic was initiated on February 7, 2011. The exact closure and re-opening dates have not yet been determined and would continue to be coordinated with the Coast Guard as the project progresses. Dates and times of closures would be provided to the Coast Guard to ensure timely notification to mariners and businesses of the pending closure of Hero Canal to vessel traffic.

## **4. CUMULATIVE IMPACTS**

The 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. A cumulative impact is defined as “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 the spatial and temporal boundaries of the actions considered in this IERS.

In addition to this IERS, 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. The draft CED to be released in 2011, will address overall cumulative impacts and the future operation, maintenance, repair, replacement and rehabilitation requirements that have been finalized at that time. Additional CED documents will be prepared after the initial draft CED release to provide updates to cumulative impacts as well as information about additional commitments (i.e., long term monitoring and analysis of the Bayou Aux Carpes and Inner Harbor Navigation Canal project areas) as monitoring or additional NEPA documents are completed. The discussion provided below describes an overview of other actions, projects, and occurrences that may contribute to the cumulative impacts previously discussed.

Without implementation of the proposed action, the 100-year level of risk reduction would be delayed which would interfere with protection of life and the reduction of physical and environmental damage. Significant flooding often results in contamination of drinking water supplies, dispersion of HTRW, and dispersion of large quantities of solid waste that require clean up and disposal. Experience has shown that vast quantities of debris (e.g., homes, vehicles, mobile homes, etc.) and sediment must be collected and hauled away after a flooding event. Hauling the collected debris to a local municipal landfill requires significant transportation and involves large quantities of solid waste that fill available landfill space. Providing the 100-year level of risk reduction significantly reduces the probability that these environmental consequences of flooding would be incurred.

Negative effects associated with implementation of the proposed action that could contribute cumulatively with the effects of other projects include impacts to local businesses due to the inability of vessels to reach their place of business. Traffic restriction in this area in addition to the traffic restrictions throughout the HSDRRS, would have a cumulative effect on businesses throughout the Greater New Orleans area. The total loss of habitat related to the implementation of all actions under all of the IERs has not yet been compiled, but the current totals are presented in table 2. When available, the loss from IERS # 13a (no habitat loss is anticipated) will be included in the total cumulative loss.

The WBV project extends approximately 66 miles in length from the Western Tie-in to the Hero Canal Levee and Eastern Terminus in Belle Chasse (IERs # 1-17). The LPV Project (IERs # 1 through 11) extends an even larger distance protecting the East Bank of New Orleans. The construction-related negative effects as well as the positive consequences (e.g., spending in the local economy) resulting from providing the 100-year level of hurricane damage risk reduction for these projects may potentially represent the largest cumulative environmental consequences in the New Orleans region for the next 4 years to 7 years.

**Table 2 : HSDRRS Impacts and Compensatory Mitigation to be Completed**

IER	Parish	Side	Non-wet		BLH <i>acres</i>	BLH <i>AAHUs</i>	Swamp		Marsh		Water <i>acres</i>
			<i>acres</i>	<i>AAHUs</i>			<i>acres</i>	<i>AAHUs</i>	<i>acres</i>	<i>AAHUs</i>	
1 LaBranche Levee	St. Charles	Protected	-	-	-	-	137.50	73.99	-	-	-
		Flood	-	11.33	8.09	143.57	110.97	-	-	-	-
1 Supplemental LaBranche Levee	St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
2 West Return Floodwall	St. Charles, Jefferson	Protected	-	-	-	-	-	-	-	-	75.00
		Flood	-	-	-	-	-	17.00	9.00	-	-
3 Jefferson Lakefront Levee	Jefferson	Protected	-	-	-	-	-	-	-	-	26.40
		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	-

IER	Parish	Side	Non-wet		BLH	Swamp		Marsh		Water
			acres	AAHUs		acres	AAHUs	acres	AAHUs	
7 Supplemental Lakefront Levee	Orleans	Protected	-	-	17.30	-	-	18.60	6.10	-
		Flood	-	-	2.80	-	-	56.00	29.80	-
8 Bayou Bienvenue/ Dupre Structures	St. Bernard	Protected	-	-	-	-	-	-	-	0.30
		Flood	-	-	-	-	-	-	-	-
9 Caenarvon Floodwall	St. Bernard	Protected	-	-	-	-	-	-	-	-
		Flood	10.00	4.65	1.16	-	-	1.90	1.20	-
10 Chalmette Loop	St. Bernard	Protected	-	-	38.32	-	-	106.55	57.31	95.00
		Flood	-	-	35.31	-	-	323.04	209.94	-
11 Tier 2 Borgne IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	-
		Flood	-	-	15.00	-	-	122.00	24.33	-
11 Tier 2, Pontchartrain IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	7.00
		Flood	-	-	-	-	-	-	-	-
12 GIWW, Harvey, Aigiers	Jefferson, Orleans, Plaquemines	Protected	-	-	251.70	-	-	-	-	-
		Flood	-	-	2.30	74.90	-	-	-	-
13 Hero Canal, Eastern Terminus	Plaquemines	Protected	-	-	13.00	-	-	-	-	-
		Flood	-	-	19.00	39.00	-	-	-	-
14	Jefferson	Protected	-	-	45.00	-	-	-	-	-

IER	Parish	Side	Non-wet		BLH acres	BLH AAHUs	Swamp		Marsh acres	Marsh AAHUs	Water acres
			acres	AAHUs			acres	AAHUs			
Westwego to Harvey Levee		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 Levee	Jefferson	Protected	-	-	23.50	6.13	-	-	-	-	-
		Flood	-	-	3.60	1.35	-	-	-	-	-
16 Western Tie-in	Jefferson, St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	137.80	66.30	-
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	-	-	-	-	-	-	-	-	-

IER	Parish	Side	Non-wet	BLH	BLH	Swamp	Swamp	Marsh	Marsh	Water		
			acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	
23 CFBM	Hancock County, MS; Plaquemines, St. Bernard, St. Charles	Protected	-	-	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
25 GFBM	Jefferson, Orleans, Plaquemines	Protected	933.00	284.00	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
26 CFBM	Jefferson, Plaquemines, St. John the Baptist; Hancock County,	Protected	-	-	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
28 GFBM	Jefferson, Plaquemines, St. Bernard	Protected	19.94	8.45	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
29 CFBM	Orleans, St. Tammany, St. John the Baptist	Protected	107.30	48.60	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
30 CFBM	St. Bernard and St. James; Hancock, MS	Protected	225.00	189.40	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
32 CFBM	Ascension, Plaquemines, St. Charles	Protected	202.10	97.43	-	-	-	-	-	-		
		Flood	-	-	-	-	-	-	-	-		
Totals			Protected	1772.03	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	178.03	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**

On the basis of the assessment of potential environmental impacts presented in this draft IERS and the evaluation of feasibility based on the engineering effectiveness, economic efficiency, and environmental and social acceptability criteria, the proposed action is selected and is environmentally preferred.

The CEQ regulations for implementing NEPA require that the Record of Decision (ROD) for an environmental impact statement specify "the alternative or alternatives which were considered to be environmentally preferable" (40 CFR §1505.2(b)). This has generally been interpreted to mean the alternative that would promote the national environmental policy as expressed in NEPA's Section 101 (CEQ's "Forty Most-Asked Questions," 46 Federal Register, 18026, March 23, 1981). Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

The proposed action for draft IERS #13a presents an engineering-effective, cost-efficient, and environmentally-preferable selection to the no action alternative. Taking no action, may lead to indirect effects from potential flooding to area residences and businesses, and associated costs for clean up due to lack of timely flood risk reduction.

The proposed action was selected because it would meet the one percent level of risk reduction goal by the start of the 2011 hurricane season in June.

## **6. COORDINATION AND CONSULTATION**

### **6.1 PUBLIC INVOLVEMENT**

Extensive public involvement has been sought in preparing IER #13. Proposed Federal projects analyzed by IERs were publicly disclosed and described in the Federal Register on March 13, 2007, (72 FR 11337) and on the website [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov). The public has been able to provide verbal comments during the meetings and written comments after each meeting in person, by mail, and via the [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov) website. A project-specific public meeting will be held during the 30 day public review period for this IERS.

Draft IER #13 was distributed for the 30-day public review of April 3, 2009, to June 1, 2009. This draft IERS will be released for public review and comment beginning March 14, 2011. A public meeting specific to the proposed action will be held during the 30 day public review period. Comments received during this public meeting will be considered part of the official record. After the expiration of the public comment period the CEMVN Commander will make a decision on the proposed action. The decision will be documented in the IERS Decision Record.

### **6.2 AGENCY COORDINATION**

Preparation of this draft IERS 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 of the project (members of this team are listed in appendix C). This interagency environmental team was integrated with the CEMVN Project Delivery Team (PDT) 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 meetings with resource agencies were also held concerning this and other CEMVN IER

projects. Project specific discussion of the proposed IERS #13a project took place during the February interagency environmental team meeting. The following agencies, as well as other interested parties, received copies of the draft IERS:

- 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 (SHPO)

The U.S. Fish and Wildlife Service (USFWS) has reviewed the proposed action and in an email dated March 2, 2011, stated that the USFWS is unaware of any known threatened or endangered species under its jurisdiction in the proposed project area. National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) has received a copy of the IERS for their review of the proposed action to ensure compliance with Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act.

In their November 8, 2007, correspondence, the NMFS Protected Resources Division provided a list of threatened and endangered species under their jurisdiction in Louisiana. Based on that information, the CEMVN made a determination of “no effect” for species under NMFS jurisdiction. In addition, Essential Fish Habitat (EFH) has not been designated for the proposed project area, so no coordination on EFH is required (NMFS, 2009).

In compliance with the Coastal Zone Management Act, the CEMVN is coordinating with the Louisiana Department of Natural Resources (LDNR) for consistency with the Louisiana Coastal Resource Program (LCRP). The Consistency Determination process is underway and will occur concurrently with the release of this draft IERS. A Consistency Determination will be received before a Decision Record is signed.

A Water Quality Certification has been received from the Louisiana Department of Environmental Quality (LDEQ) by letter dated February 9, 2011, (appendix D). An Air Quality certification is being coordinated with LDEQ through the 30-day public review period associated with IERS #13a.

Section 106 of the National Historic Preservation Act, as amended, requires consultation with SHPO and Native American tribes. SHPO reviewed the action described in IER #13 and determined that it would not adversely affect any cultural resources by letter dated March 30, 2009. Eleven Federally recognized tribes that have an interest in the region were given the opportunity to review and comment on the actions discussed in IER #13. The proposed action is within the original area of potential effect (APE) in an area with no potential for cultural resources; therefore, the CEMVN has determined that additional Section 106 consultation is not required.

Section 10 Coordination with the U.S. Coast Guard New Orleans Sector, Waterways Management Division regarding the proposed action to temporarily close Hero Canal to vessel

traffic was initiated on February 7, 2011. The closure times and durations have not been determined and would continue to be coordinated with the Coast Guard as the project progresses, and dates and times would be provided to ensure timely notification to mariners and businesses of the pending closure of Hero Canal to vessel traffic.

The USFWS reviewed the proposed action in accordance with the Fish and Wildlife Coordination Act and prepared a draft Coordination Act Report including recommendations for IERS #13a dated February 14, 2011. A final report will be prepared after the 30-day review period. All comments related to USFWS trust resources have been addressed and/or resolved. The USFWS also 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. At that time 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. 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 applicable to this project, and the CEMVN’s response to them, are listed below:

Recommendation 1: To the greatest extent possible, situate flood risk reduction so that destruction of wetlands and non-wet BLHs are avoided or minimized.

CEMVN Response 1: The project will utilize the authorized level of risk reduction footprint and minimize impacts to wetlands.

Recommendation 2: Minimize enclosure of wetlands with new levee alignments. When enclosing wetlands is unavoidable, acquire non-development easements on those wetlands, or maintain hydrologic connections with adjacent, un-enclosed wetlands to minimize secondary impacts from development and hydrologic alteration.

CEMVN Response 2: Concur

Recommendation 3: Avoid adverse impacts to bald eagle nesting locations and wading bird colonies through careful design project features and timing of construction.

CEMVN Response 3: Concur

Recommendation 4: Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.

CEMVN Response 4: This recommendation will be considered in the design of the project to the greatest extent practicable.

Recommendation 5: The project's first Project Cooperation Agreement (or similar document) should include language that includes the responsibility of the local-cost sharer to provide operational, monitoring, and maintenance funds for mitigation features.

CEMVN Response 5: Corps Project Partnering Agreements (PPA) do not contain language mandating the availability of funds for specific project features, but require the non-Federal sponsor to provide certification of sufficient funding for the entire project. Further, mitigation components are considered a feature of the entire project. The non-Federal sponsor is responsible for Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) of all project features accordance with the OMRR&R manual that the Corps provides upon completion of the project.

Recommendation 6: 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 USFWS, NMFS, Louisiana Department of Wildlife and Fisheries (LDWF), U.S. EPA, and LDNR. The USFWS shall be provided an opportunity to review and submit recommendations on all the work addressed in those reports.

CEMVN Response 6: Concur.

Recommendation 7: The CEMVN should avoid impacts to public lands, if feasible. If not feasible, the CEMVN 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. Points of contacts for the agencies overseeing public lands potentially impacted by project features are: Kenneth Litzenberger, Project Leader for the USFWS' Southeast National Wildlife Refuges, and Jack Bohannon (985) 822-2000, Refuge Manager for the Bayou Sauvage National Wildlife Refuge (NWR), Office of State Parks contact Mr. John Lavin at 1-888-677-1400, National Park Service (NPS) contact Superintendent David Luchsinger, (504) 589-3882, extension 137 (david\_luchsinger@nps.gov), or Chief of Resource Management David Muth (504) 589-3882, extension 128 (david\_muth@nps.gov) and for the 404(c) area contact the previously mentioned NPS personnel and Ms. Barbara Keeler (214) 665-6698 with the USEPA.

CEMVN Response 7: Concur.

Recommendation 8: If applicable, a General Plan should be developed by the CEMVN, the

USFWS, and the managing natural resource agency in accordance with Section 3(b) of the Fish and Wildlife Coordination Act (FWCA) for mitigation lands.

CEMVN Response 8: Concur.

Recommendation 9: If mitigation lands are purchased for inclusion within a NWR, those lands must meet certain requirements; a summary of some of those requirements is provided in appendix I (to the draft Fish and Wildlife Coordination Act Report.) Other land-managing natural resource agencies may have similar requirements that must be met prior to accepting mitigation lands; therefore, if they are proposed as a manager of a mitigation site, they should be contacted early in the planning phase regarding such requirements.

CEMVN Response 9: Concur.

Recommendation 10: If a proposed project feature is changed significantly or is not implemented within one year of the date of the Endangered Species Act consultation letter, the USFWS recommended that the Corps reinitiate coordination to ensure that the proposed project would not adversely affect any federally-listed threatened or endangered species or their habitat.

CEMVN Response 10: Concur.

Recommendation 11: In general, larger and more numerous openings in a risk reduction levee better maintain estuarine-dependent fishery migration. Therefore, as many openings as practicable, in number, size, and diversity of locations should be incorporated into project levees.

CEMVN Response 11: Concur

Recommendation 12: Flood risk reduction water control structures in any watercourse should maintain pre-project cross-sections in width and depth to the maximum extent practicable, especially structures located in tidal passes.

CEMVN Response 12: Concur

Recommendation 13: Flood risk reduction water control structures should remain completely open except during storm events. Management of those structures should be developed in coordination with the USFWS, NMFS, LDWF, and LDNR.

CEMVN Response 13: Concur

Recommendation 14: Any flood risk reduction water control structure sited in canals, bayous, or a navigation channel which does not maintain the pre-project cross-section

should be designed and operated with multiple openings within the structure. This should include openings near both sides of the channel as well as an opening in the center of the channel that extends to the bottom.

CEMVN Response 14: Concur

Recommendation 15: The number and siting of openings in flood risk reduction levees should be optimized to minimize the migratory distance from the opening to enclosed wetland habitats.

CEMVN Response 15: Concur

Recommendation 16: Flood risk reduction structures within a waterway should include shoreline baffles and/or ramps (e.g., rock rubble, articulated concrete mat) that slope up to the structure invert to enhance organism passage. Various ramp designs should be considered.

CEMVN Response 16: Concur

Recommendation 17: To the maximum extent practicable, structures should be designed and/or selected and installed such that average flow velocities during peak flood or ebb tides do not exceed 2.6 ft per second. However, this may not necessarily be applicable to tidal passes or other similar major exchange points.

CEMVN Response 17: Concur

Recommendation 18: To the maximum extent practicable, culverts (round or box) should be designed, selected, and installed such that the invert elevation is equal to the existing water depth. The size of the culverts selected should maintain sufficient flow to prevent siltation.

CEMVN Response 18: Concur

Recommendation 19: Culverts should be installed in construction access roads unless otherwise recommended by the natural resource agencies. At a minimum, there should be one 24-inch culvert placed every 500 ft and one at natural stream crossings. If the depth of water crossings allow, larger-sized culverts should be used. Culvert spacing should be optimized on a case-by-case basis. A culvert may be necessary if the road is less than 500 ft long and an area would hydrologically be isolated without that culvert.

CEMVN Response 19: Concur

Recommendation 20: Water control structures should be designed to allow rapid opening in the absence of an offsite power source after a storm passes and water levels return to normal.

CEMVN Response 20: Concur

Recommendation 21: Levee alignments and water control structure alternatives should be selected to avoid the need for fishery organisms to pass through multiple structures (i.e., structures behind structures) to access an area.

CEMVN Response 21: Concur

Recommendation 22: Operational plans for water control structures should be developed to maximize the cross-sectional area open for as long as possible. Operations to maximize freshwater retention or redirect freshwater flows could be considered if hydraulic modeling demonstrates that is possible and such actions are recommended by the natural resource agencies.

CEMVN Response 22: Concur

Recommendation 23: CEMVN shall fully compensate for any unavoidable losses of wetland habitat or non-wet BLHs caused by project features.

CEMVN Response 23: Concur.

Recommendation 24: 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 CEMVN shall provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

CEMVN Response 24: Construction of the project features are cost shared between the Government and non-Federal sponsor. However, costs for operation, maintenance, repair, replacement, and rehabilitation will be the responsibility of the non-Federal sponsor.

Recommendation 25: Any proposed change in mitigation features or plans should be coordinated in advance with the USFWS, NMFS, LDWF, USEPA, and LDNR.

CEMVN Response 25: Mitigation for the impacts caused by this project will be coordinated through a mitigation IER. Any material changes to the mitigation plan in this IER would be coordinated in advance.

Recommendation 26: A report documenting the status of mitigation implementation and maintenance should be prepared every three years by the managing agency and provided to the CEMVN, USFWS, NMFS, USEPA, LDNR, and LDWF. That report should also describe future management activities,

and identify any proposed changes to the existing management plan.

CEMVN Response 26: Concur.

The CEMVN received a draft Coordination Act Report from the USFWS for IER # 13a on February 14, 2011. The USFWS recommended using the recommendations in the final CAR for IER #13. The USFWS' recommendations applicable to this project would be incorporated into project design studies to the extent practicable, consistent with engineering and public safety requirements. The USFWS' project specific recommendations, and the CEMVN's response to them, are listed below:

Recommendation 1: To the greatest extent possible, design and position flood protection features so that destruction of wetlands and non-wet BLHs are avoided or minimized.

CEMVN Response 1: The CEMVN will take all measures to ensure all risk reduction features are constructed within pre-existing ROW before acquiring additional ROW within adjacent wetlands and non-wet BLHs. In addition, the engineering and design of the new construction risk reduction components within the proposed action will avoid or minimize wetland impacts.

Recommendation 2: The proposed Oakville pump station should be redesigned to pump stormwater into the adjacent forested wetlands as a stormwater treatment measure and to enhance those degraded wetlands.

CEMVN Response 2: Concur.

Recommendation 3: The USACE shall fully compensate for any unavoidable losses of wet or non-wet BLH habitat (18.39 AAHUs) and swamp habitat (28.27 AAHUs) caused by project features.

CEMVN Response 3: The CEMVN will fully mitigate for any unavoidable losses of wetlands or non-wet BLHs incurred due to the proposed action.

Recommendation 4: Minimize enclosure of wetlands with new levee alignments. When enclosing wetlands is unavoidable, acquire non-development easements on those wetlands, or maintain hydrologic connections with adjacent, un-enclosed wetlands to minimize secondary impacts from development and hydrologic alteration.

CEMVN Response 4: Acknowledged. The CEMVN selected against alternative 3 to avoid enclosing approximately 53 acres of BLH and cypress swamp wetlands.

Recommendation 5: If a proposed project feature is changed significantly or is not implemented within one year of the date of the March 10, 2009 ESA consultation letter, we recommend that the USACE reinitiate coordination with each office to ensure that the proposed project would not adversely affect any Federally listed threatened or endangered species or their habitat.

CEMVN Response 5: Concur. The USACE has reinitiated coordination and received an updated consultation letter dated 9 March 2009.

Recommendation 6: Avoid adverse impacts to bald eagle nesting locations and wading bird colonies through careful design of project features and timing of construction. A qualified biologist should inspect the proposed work site for the presence of undocumented wading bird nesting colonies and bald eagles during the nesting season (i.e., 16 February through 31 October for wading bird nesting colonies, and October through mid-May for bald eagles).

CEMVN Response 6: Concur.

Recommendation 7: To minimize disturbance to colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 ft of a rookery should be restricted to the non-nesting period (i.e., 1 September through 15 February, exact dates may vary within this window depending on species present). In addition, we recommend that on-site contract personnel be informed of the need to identify colonial nesting birds and their nests, and should avoid affecting them during the breeding season.

CEMVN Response 7: Concur.

Recommendation 8: If a bald eagle nest is discovered within or adjacent to the proposed project area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at: <http://www.USFWS.gov/southeast/es/baldeagle>. Following completion of the evaluation, that website will provide a determination of whether additional consultation is necessary and those results should be forwarded to this office.

CEMVN Response 8: Concur.

Recommendation 9: Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.

CEMVN Response 9: Concur.

Recommendation 10: 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 USACE should provide the necessary funding to ensure mitigation obligations are met on behalf of the public interest.

CEMVN Response 10: Construction of the project features are cost shared between the Government and the non-Federal sponsor. However, costs for operation, maintenance, repair, replacement, and rehabilitation will be the responsibility of the non-Federal sponsor.

Recommendation 11: 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, LADWF, EPA, NPS, and LADNR. The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.

CEMVN Response 11: Concur.

Recommendation 12: If mitigation lands are purchased for inclusion within Federally or State managed lands, those lands must meet certain requirements; therefore the land manger of that management area should be contacted early in the planning phase regarding such requirements.

CEMVN Response 12: Concur.

Recommendation 13: If applicable, a General Plan should be developed by the USACE, the Service, and the managing natural resource agency in accordance with Section 3(b) of the FWCA for mitigation lands.

CEMVN Response 13: Concur.

Recommendation 14: Flood protection water control structures in any watercourse should maintain pre-project cross section in width and depth to the maximum extent practicable.

CEMVN Response 14: Concur.

Recommendation 15: Any flood protection water control structure sited in a canal, bayou, or navigation channel that does not maintain the pre-project cross section should be designed and operated with multiple openings within the structure. This should include openings near both sides of the channel as well as an opening in the center of the channel that extends to the bottom.

CEMVN Response 15: The CEMVN proposes to construct a closure structure in the Hero Canal. This complex would include a 56-ft stoplog gate, and a 70-150 cfs pump station. Hydrologic modeling, navigation simulation modeling, and engineering design efforts are still underway to determine the exact specification of the closure. This comment will be considered during the final engineering and design efforts.

Recommendation 16: Flood protection water control structures should remain completely open except during storm events, unless otherwise determined by the natural resource agencies.

CEMVN Response 16: Concur. This comment will be considered during the final engineering and design efforts for the 56-ft stoplog closure, and pump station to be constructed in Hero Canal.

Recommendation 17: Flood protection structures within a waterway should include shoreline baffles and/or ramps (e.g., rock rubble, articulated concrete mat) that slope up to the structure invert to enhance organism passage. Various ramp designs should be considered, and coordination should continue with the natural resource agencies to ensure fish passage features are incorporated to the fullest extent practicable.

CEMVN Response 17: Concur. This comment will be considered during the final engineering and design efforts for the 56-ft stoplog closure, and pump station to be constructed in Hero Canal.

Recommendation 18: A report documenting the status of mitigation implementation and maintenance should be prepared every three years by the managing agency and provided to the USACE, the Service, NMFS, EPA, LADNR, and LADWF. That report should also describe future management activities, and identify any proposed changes to the existing management plan.

CEMVN Response 18: Concur.

Recommendation 19: The proposed Oakville pump station should be redesigned to pump daily storm water into the adjacent forested wetlands as a storm water treatment measure and to enhance those degraded wetlands.

CEMVN Response 19: Currently daily storm water from the Oakville area drains into the Ollie Canal through an existing corrugated metal pipe. Once proposed construction of the gravity drain/pump station is complete, daily storm water will continue to be drained into the Ollie Canal through a concrete box culvert gravity drain. During a hurricane event with high water on the flood side of the protection, the sluice gate on the gravity drain will be closed to prevent flood side water from backing up into the gravity drain. The interior draining storm water will no longer drain by gravity to the Ollie Canal, but will be pumped via the proposed pump station into the Cypress Swamp. Water will be pumped into the Cypress Swamp in lieu of the Ollie Canal to lessen the burden on the Ollie Canal and Ollie Pump Station.

The intent of the Oakville pump station is to be used only during hurricane high water events when the gravity drain sluice gate is closed

and flood side water elevation would be too high to drain storm water from the Oakville area into the Ollie Canal with gravity. The existing ground elevation of the Cypress Swamp is higher than the drainage ditch on the protected side, making it impossible to discharge storm water into the Cypress Swamp with a gravity drain.

Pumping daily storm water into the Cypress Swamp instead of discharging it into the Ollie Canal with gravity would require additional effort and expense due to significant increase in operating time of the pumps. Plaquemines Parish and USACE does not support operating the pump for daily storm water when the storm water can continue to be discharged into the Ollie Canal through a gravity drain, similar to current conditions, without the additional unnecessary expense of operating a pump.

## **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. The 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 be available for a 30-day public review and comment period.

The methodology being utilized in determining appropriate mitigation, which would include no net loss of wetland values, is the interagency Wetland Value Assessment (WVA). The WVA computes the Average Annualized Habitat Units (AAHUs) lost by project implementation. The AAHUs are converted to acres needed to meet the nation's no-net-loss of wetlands policy once the mitigation site is selected.

No impacts to the natural environment have been identified for this project. There are some anticipated impacts to the human environment associated with this proposed action. The socioeconomic impacts to the businesses along the Hero Canal were avoided in IER #13. However, to sufficiently provide 100-year level of risk reduction by this hurricane season, temporary impacts to these businesses as described herein would be likely. When possible, intermittent closures would be conducted as to minimize these impacts. Compensatory mitigation for habitat losses associated with HSDRRS construction will be discussed in separate mitigation IERs.

A complementary comprehensive mitigation IER or IERs will be prepared, documenting and compiling unavoidable impacts 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, thus increasing the relative economic and ecological benefits of the mitigation effort. The forthcoming mitigation IER will implement compensatory mitigation as early as possible. All mitigation activities will be consistent with standards and policies established in appropriate Federal and state laws and USACE policies and regulations.

## 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 IERS with appropriate agencies, organizations, and individuals for their review and comments; USFWS and 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; LDNR concurrence with the determination that the proposed action is consistent, to the maximum extent practicable, with the LCRP; 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 SHPO; receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations; and receipt and acceptance or resolution of all EFH recommendations.

Executive Order (E.O.) 11988. E.O. 11988, Floodplain Management, addresses minimizing or avoiding adverse impacts associated with the base floodplain unless there are no practicable alternatives. It also involves giving public notice of proposed actions that may affect the base floodplain. The proposed action would not accelerate development of the floodplain for the following reasons: development of the study area is more closely related to access routes and the need for affordable housing space than flooding potential and conditions conducive for development were established initially when the area was levied and forced drainage was initiated in the middle 1960s.

Executive Order 11990. E.O. 11990, Protection of Wetlands, has been important in project planning.

Consistency with Coastal Zone Management (CZM) Program. The CEMVN has determined that changes in design implementation of 100-year level of risk reduction along the WBV, are consistent to the maximum extent practicable, with the guidelines of the State of Louisiana's approved Coastal Zone Management Program. A CZM consistency determination was prepared and provided to the LDNR on February 9, 2011. CZM coordination is ongoing and will take place concurrently with the public review of this draft IERS. The consistency letter of approval from the LDNR will complete the consistency requirements. A Decision Record will not be signed until the requirements are complete.

Clean Air Act. The original 1970 Clean Air Act (CAA) authorized the USEPA to establish National Ambient Air Quality Standards (NAAQS) to limit levels of pollutants in the air. USEPA has promulgated NAAQS for six criteria pollutants: sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), ozone, lead, and particulate matter (PM-10). All areas of the United States must maintain ambient levels of these pollutants below the ceilings established by the NAAQS; any area that does not meet these standards is considered a "non-attainment" area (NAA). The 1990 Amendments require that the boundaries of serious, severe, or extreme ozone or CO non-attainment areas located within Metropolitan Statistical Areas (MSAs) or Consolidated Metropolitan Statistical Areas (CMSAs) be expanded to include the entire MSA or CMSA unless the governor makes certain findings and the Administrator of the USEPA concurs. Consequently, all urban counties included in an affected MSA or CMSA, regardless of their attainment status, will become part of the NAA. The project is located in Plaquemines Parish, which is classified as an attainment area; therefore NAAQS are not applicable to this project.

Clean Water Act. The Clean Water Act (CWA; 33 U.S.C. 1251-1387; Act of June 30, 1948, as amended) is a very broad statute with the goal of maintaining and restoring waters of the United States. The CWA authorizes water quality and pollution research, provides grants for sewage treatment facilities, sets pollution discharge and water quality standards, addresses oil and hazardous substances liability, and establishes permit programs for water quality, point source pollutant discharges, ocean pollution discharges, and dredging or filling of wetlands. The intent of the CWA's §404 program and its §404(b)(1) "Guidelines" is to prevent destruction of aquatic ecosystems including wetlands, unless the action will not individually or cumulatively adversely affect the ecosystem. Section 404(b)(1) guidelines were used to evaluate the discharge of dredged or fill material for adverse impacts to the aquatic ecosystem. The proposed project complies with the requirements of the guidelines. A 404(b)(1) was completed for IER #13 and signed on December 4, 2009. The LDEQ Water Quality Certification letter, WQC 090128-01/AI 162810/CER20110001, dated February 9, 2011, completes the certification process.

Endangered Species Act. The Endangered Species Act (16 U.S.C. 1531-1543; P.L. 93-205, as amended) was enacted in 1973 to provide for the conservation of species that are in danger of extinction throughout all or a significant portion of their range. "Species" is defined by the Act to mean either a species, a subspecies, or, for vertebrates (*i.e.*, fish, reptiles, mammals, etc.) only, a distinct population. No threatened or endangered species or their critical habitat would be impacted by the proposed action. The USFWS concurred with the CEMVN's determination in their email dated March 2, 2011.

Fish and Wildlife Coordination Act. The Fish and Wildlife Coordination Act (16 U.S.C. 661-666c; Act of March 10, 1934, as amended) requires that wildlife, including fish, receive equal consideration and be coordinated with other aspects of water resource development. This is accomplished by requiring consultation with the USFWS and NMFS whenever modifications are proposed to a body of water and a Federal permit or license is required. This consultation determines the possible harm to fish and wildlife resources, and the measures that are needed to both prevent the damage to and loss of these resources, and to develop and improve the resources, in connection with water resource development. NMFS submits comments and recommendations to Federal licensing and permitting agencies, and to Federal agencies conducting construction projects on the potential harm to living marine resources caused by proposed water development projects, and suggests recommendations to prevent harm. The USFWS provided 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 (USFWS, 2007). To fulfill the responsibilities of the Fish and Wildlife Coordination Act, the USFWS will provide a post-authorization final supplemental 2(b) report to the draft programmatic report. A draft project-specific Coordination Act Report was received from USFWS by letter dated February 14, 2011. A final report will be prepared after the 30-day public review period. All comments regarding USFWS trust resources have been resolved.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act of 1918 (MBTA) is the domestic law that affirms, or implements, the United States' commitment to four international conventions with Canada, Japan, Mexico, and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possessing, transporting, and importing of migratory birds, their eggs, parts, and nests. The taking of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent over-utilization. Section 704 of the MBTA states that the Secretary of the Interior is authorized and directed to determine if, and by what means, the taking of migratory birds should be allowed and to adopt suitable regulations permitting and governing taking. The MBTA prohibits the taking, possessing, importing, exporting, transporting, selling, purchasing bartering, or offering for sale, purchase or barter, of

any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR §21.11). The USFWS addressed compliance with this Act in the “Draft Fish and Wildlife Coordination Act Report for the 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 (USFWS, 2007). To fulfill the responsibilities of the Fish and Wildlife Coordination Act, the USFWS will provide a post-authorization final supplemental 2(b) report to the draft programmatic report.

National Environmental Policy Act. The NEPA ( 42 U.S.C. 4321-4347; Pub. L. 91-190, as amended) requires Federal agencies to analyze the potential effects of a proposed Federal action that would significantly affect historical, cultural, or natural aspects of the environment. It specifically requires agencies to use a systematic, interdisciplinary approach in planning and decision-making, to insure that environmental values may be given appropriate consideration, and to provide detailed statements on the environmental impacts of proposed actions including: (1) any adverse impacts; (2) alternatives to the proposed action; and (3) the relationship between short-term uses and long-term productivity. The agencies use the results of this analysis in decision-making. The preparation of this IERS is a part of compliance with NEPA.

National Historic Preservation Act. Congress established the most comprehensive national policy on historic preservation with the passage of the National Historic Preservation Act of 1966 (NHPA). In this act, historic preservation was defined to include "the protection, rehabilitation, restoration and reconstruction of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, or culture." The act led to the creation of the National Register of Historic Places, a file of cultural resources of national, regional, state, and local significance. The act also established the Advisory Council on Historic Preservation (the Council), an independent Federal agency responsible for administering the protective provisions of the act. The major provisions of the NHPA are Sections 106 and 110. Both sections aim to ensure that historic properties are appropriately considered in planning Federal initiatives and actions. Section 106 is a specific, issue-related mandate to which Federal agencies must adhere. It is a reactive mechanism that is driven by a Federal action. Section 110, in contrast, sets out broad Federal agency responsibilities with respect to historic properties. It is a proactive mechanism with emphasis on ongoing management of historic preservation sites and activities at Federal facilities. Coordination of this project with SHPO fulfills the requirements to comply with the NHPA, and the SHPO letter dated March 30, 2009, concludes this process.

## 9. CONCLUSION

### 9.1 PROPOSED DECISION

The proposed action would require closure of the Hero canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days to meet the one percent level of risk reduction by the beginning of the 2011 hurricane season on June 1 . Closure of the canal could begin as early as April 15, 2011, or as late as May 15, 2011, and end as late as July 15, 2011, if the closure start date is delayed.

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

- Short-term impacts to vessel traffic in the Hero Canal
- Short-term impacts to businesses reliant on vessel access
- Short-term impacts to recreation due to lack of boat access to the eastern side of Hero Canal during closure

### 9.2 Prepared By

The point of contact and responsible manager for the preparation of this IERS is Tammy Gilmore, CEMVN. The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Planning, Programs, and Project Management Division, CEMVN-PM; P.O. Box 60267; New Orleans, Louisiana 70160-0267. Table 3 lists the preparers of the various sections and topics in this IERS.

**Table 3. Draft IERS #13a Preparation Team**

Environmental Team Leader	Sandy Stiles, CEMVN
Environmental Manager	Tammy Gilmore, CEMVN
Sr. Project Manager	Ted Carr, CEMVN
Review	Robert Northey CEMVN – Office of Counsel
Review	Thomas Keevin, CEMVS – Agency Technical Review
HTRW	J. Christopher Brown, CEMVN
Cultural Resources	Eric Williams, CEMVN
Recreational Resources	Andrew Perez, CEMVN
Aesthetic Resources	Kelly McCaffrey, CEMVN
Environmental Justice	Eric Williams CEMVN
Economics	Joseph Mann, CEMVN
Technical Editor	Jennifer Darville, CEMVN

### 9.3 LITERATURE CITED

Council on Environmental Quality (CEQ). 1997. Environmental Justice Guidance Under the National Environmental Policy Act. Executive Office of the President. Washington, D.C.

Department of the Army, Corps of Engineers, New Orleans District. 2009. Final Individual Environmental Report – Hero Canal Levee and Eastern Tie-In, Plaquemines Parish, Louisiana, IER#13, December 4, 2009.

# APPENDICES

## APPENDIX A - LIST OF ACRONYMS AND DEFINITIONS OF COMMON TERMS

AAHUs	Annual Average Habitat Units
AD	Anno Domini
ASTM	American Society for Testing and Materials
BFI	Browning-Ferris Industries Landfill
BLH	Bottomland Hardwood Forest
BNSF	Burlington Northern Santa Fe
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
EO	Executive Order
EPW	Evaluation Of Planned Wetlands
ER	Engineering Regulation
ESA	Environmental Site Assessment
FCU	Functional Capacity Units
FCI	Functional Capacity Index
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWCA	Fish and Wildlife Coordination Act
DPR	Detailed Project Report
DPR/EA	Detailed Project Report/Environmental Assessment
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FWCA	Fish and Wildlife Coordination Act
HSDRRS	Greater New Orleans Hurricane and Storm Damage Risk Reduction System
HTRW	Hazardous, Toxic, and Radioactive Waste
HPS	Hurricane Protection System
IER	Individual Environmental Report
LCRP	Louisiana Coastal Resources Program
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LPV	Lake Ponchartrain and Vicinity

MBTA	Migratory Bird Treaty Act
ML	Milliliters
MPH	Miles per Hour
MSA	Metropolitan Statistical Area
NAA	Non Attainment Area
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
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	National Resources Conservation Service
NWR	National Wildlife Refuge
O&M	Operations And Maintenance
OMRR&R	Operations, Maintenance, Repair, Replacement, & Rehabilitation
OSE	Other Social Effects
PA	Programmatic Agreement
PDT	Project Delivery Team
PL	Public Law
PPA	Project Partnering Agreements
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
TMDL	Total Maximum Daily Load
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
WVA	Wetlands Value Assessment

APPENDIX B - PUBLIC COMMENT AND RESPONSE SUMMARY

**TO BE ADDED AFTER 30 DAY PUBLIC REVIEW PERIOD**

## APPENDIX C - MEMBERS OF INTERAGENCY ENVIRONMENTAL TEAM

Kyle Balkum	Louisiana Dept. of Wildlife and Fisheries
Catherine Breaux	U.S. Fish and Wildlife Service
Mike Carloss	Louisiana Dept. of Wildlife and Fisheries
David Castellanos	U.S. Fish and Wildlife Service
Frank Cole	Louisiana Department of Natural Resources
Greg Ducote	Louisiana Department of Natural Resources
John Ettinger	U.S. Environmental Protection Agency
David Felder	U.S. Fish and Wildlife Service
Michelle Fischer	U.S. Geologic Survey
Deborah Fuller	U.S. Fish and Wildlife Service
Mandy Green	Louisiana Department of Natural Resources
Jeffrey Harris	Louisiana Department of Natural Resources
Richard Hartman	NOAA National Marine Fisheries Service
Brian Heimann	Louisiana Dept. of Wildlife and Fisheries
Jeffrey Hill	NOAA National Marine Fisheries Service
Christina Hunnicutt	U.S. Geologic Survey
Barbara Keeler	U.S. Environmental Protection Agency
Kirk Kilgen	Louisiana Department of Natural Resources
Tim Killeen	Louisiana Department of Natural Resources
Brian Lezina	Louisiana Dept. of Wildlife and Fisheries
Brian Marks	Louisiana Dept. of Wildlife and Fisheries
Ismail Merhi	Louisiana Department of Natural Resources
David Muth	U.S. National Park Service
Clint Padgett	U.S. Geologic Survey
Jamie Phillippe	Louisiana Dept. of Environmental Quality
Molly Reif	U.S. Geologic Survey
Kevin Roy	U.S. Fish and Wildlife Service
Manuel Ruiz	Louisiana Dept. of Wildlife and Fisheries
Reneé Sanders	Louisiana Department of Natural Resources
Angela Trahan	U.S. Fish and Wildlife Service
Nancy Walters	U.S. Fish and Wildlife Service
David Walther	U.S. Fish and Wildlife Service
Patrick Williams	NOAA National Marine Fisheries Service

## **APPENDIX D – INTERAGENCY CORRESPONDENCE**



## United States Department of the Interior

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



February 14, 2011

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

Dear Colonel Fleming:

Please reference the February 9, 2011, electronic correspondence providing supplemental information regarding Individual Environmental Report (IER) #13 titled, "West Bank and Vicinity (WBV), Hero Canal Levee and Eastern Terminus, Plaquemines Parish, Louisiana." A Supplemental IER 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 by 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 U.S. Army 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 supplemental report addresses fish and wildlife resources in the project area and impacts to those resources associated with the proposed project.

The U.S. Fish and Wildlife Service (Service) provided 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 November 24, 2009, FWCA Report that provided recommendations specific to IER 13. This letter supplements our previous reports and addresses the proposed temporary closure of Hero Canal to vessel traffic in order to complete construction on the bulkhead. This work is necessary to meet the Corps' June 1, 2011, deadline for achieving a 100-year level of risk reduction. 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 within Plaquemines 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 residential, commercial, and agricultural development. Federal, State, and local levees have been installed for flood protection purposes, often with negative effects on adjacent wetlands. The Mississippi River, the Gulf Intracoastal Waterway, and Hero Canal are prominent landscape features. Extensive wetlands and associated shallow open waters dominate the landscape outside the flood control levees.

Habitat types in the study area include forested wetlands (i.e., bottomland hardwoods in varying successional stages and/or swamps), 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 proposed change in plans.

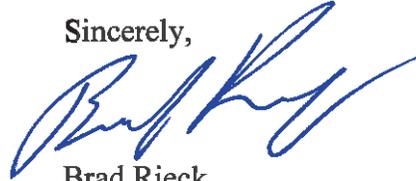
To ensure a 100-year level of protection by June 1, 2011, the construction of the Hero Canal structure will require complete closure of the canal to vessel traffic for an estimated 30 to 60 days. It is likely this closure will occur in two intermittent events within a 90 day period. The closure period would begin between April 15, 2011, and May 15, 2011, and depending on the date of initiation last until mid-July. The closure of Hero Canal to facilitate expedited construction would not require expansion outside the previously approved right-of-way, and additional impacts to fish and wildlife habitat are not expected.

## **SERVICE POSITION AND RECOMMENDATIONS**

Because the proposed project does not require mitigation and will not impact high quality fish and wildlife habitat, the Service still does not object to the construction of the proposed project but believes that the recommendations provided in our previous FWCA Reports remain valid and should be incorporated into future project planning and implementation.

Should you or your staff have any questions regarding this letter and our attached report, please contact Angela Trahan (337/291-3137) of this office.

Sincerely,



Brad Rieck  
Acting Field Supervisor  
Louisiana Ecological Services  
Office

cc: NMFS, Baton Rouge, LA  
EPA, Dallas, TX  
LDWF, Baton Rouge, LA  
LDNR, CMD, Baton Rouge, LA  
OCPR, Baton Rouge, LA

**From:** [Williams, Eric MVN](#)  
**To:** [Gilmore, Tammy H MVN](#)  
**Subject:** FW: Supplement to IER 13 (WBV-9B), Closure of Hero Canal (UNCLASSIFIED)  
**Date:** Tuesday, February 15, 2011 1:10:32 PM

---

Classification: UNCLASSIFIED  
Caveats: NONE

FYI

-----Original Message-----

From: Patrick Williams [<mailto:Patrick.Williams@noaa.gov>]  
Sent: Wednesday, February 09, 2011 1:19 PM  
To: Williams, Eric MVN  
Cc: angela\_trahan@fws.gov; ettinger.john@epa.gov; Richard Hartman  
Subject: Re: Supplement to IER 13 (WBV-9B), Closure of Hero Canal (UNCLASSIFIED)

Eric,

I have reviewed the provided updates to be addressed in a Supplement to IER 13. Although the closure represents a change from that planned and disclosed previously, the closure would be short term and temporary. Further, the area it affects is marginally supportive of estuarine species on an infrequent basis, if at all. Accordingly, we have no comments to offer on the proposed temporary closure.

Thank you for coordinating with NMFS.

On 2/9/2011 10:30 AM, Williams, Eric MVN wrote:

- > Classification: UNCLASSIFIED
- > Caveats: NONE
- >
- >
- > Angela,
- > We are doing a supplement to Individual Environmental Report (IER) #13
- > for the West Bank and Vicinity Hero Canal and Eastern Tie-In in
- > Plaquemines Parish. The supplement is for the short term closure of
- > Hero Canal to vessel traffic for a maximum of 60 days and a minimum of
- > 30 days intermittently over a 90 day period. The closure is to
- > complete construction on the bulkhead to meet the June 1, 2011 level
- > of risk reduction deadline. The supplement to IER 13 is a HSDRRS project and has a very short time
- > frame for completion.
- > Our schedule would be to go out for 30-day public review from March 9
- > - April 6, and hopefully have a decision signed by April 12.
- >
- > The US Fish and Wildlife Service prepared and provided a Fish and
- > Wildlife Coordination Act Report in November 2009 for IER 13, and a
- > Decision Record was signed on 4 December 2009. The proposed action, as
- > described in the Final Addendum to IER #13, begins at Hero Canal south
- > of the confluence of the Algiers and Harvey Canals off of the Gulf
- > Intracoastal Waterway. The first portion of the alignment is referred
- > to as WBV-12, the Hero Canal Levee, which is an earthen levee
- > bordering the north bank of Hero Canal. The alignment then crosses
- > Hero Canal to the south with a closure structure and 70 cubic feet per
- > second pump station in a reach referred to as WBV-9b. The earthen
- > levee to the south and east of the Hero Canal, as well as the 150
- > cubic feet per second pump station structure is referred to as WBV-9a.
- > As the alignment crosses Highway 23 the closure structures are

> referred to as WBV-9c. The WBV-9c structures transition into earthen levee (WBV-9a) that tie into the Mississippi River Levee (MRL).

>

> The proposed supplement to the IER 13 would be a closure of Hero Canal to vessel traffic for a short period of time. Regarding the construction of the Hero Canal closure structure (WBV-9b), IER 13 states "During construction the stoplog closure would be built in phases, allowing continuous passage of vessels in the canal."

>

> However, it may now be necessary to close the canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days to meet the planned June 1, 2011 level of risk reduction. Closure of the canal could begin as early as 15 April 2011 or as late as 15 May 2011 and end as late as 15 July 2011 if closure is delayed. In summary, the current estimate is forecasting a maximum of 60 days of intermittent closure over a 90 day period that will most likely occur in two events.

>

> The accelerated construction sequencing to meet the June 1, 2011 level of risk reduction indicates that the bulkhead closure structure will be in the final stages of construction in mid April of 2011, but will require future fitting of the stoplogs that must be performed in the dry. The delivery schedule of the stoplogs will determine if it is done with the construction Temporary Retaining Structure (TRS) in place or if a second dewatering of the closure structure will be required using dewatering needles. It is estimated that the fitting of the stoplogs could require a maximum of 30 day to complete after the closure structure is constructed. If this were to occur, the closure of the bypass channel would be delayed well into hurricane season placing the polder at risk of flooding during a storm event. To avert the risk of flooding, the bypass channel closure would be required to begin on April 15, 2011 and the bypass channel temporary retaining system would be constructed as temporary flood protection to prevent flood waters from entering the Hero Canal. The installation of the temporary retaining system in the bypass channel is estimated to take six weeks to complete and if construction starts on April 15, 2011 it would be in place on June 1, 2011.

> The original plan allowed time to complete the bulkhead closure structure, including the fitting of the stoplogs, before redirecting canal traffic from the bypass channel to passage through the completed closure structure. The proposed re-sequenced schedule provides 100 year level of risk reduction for the closure structure on June 1, 2011.

>

> The closure of Hero Canal to vessel traffic under this supplement to IER 13 would require no expansion of footprint or additional disturbance. Please email me or call if you have questions or need additional information.

>

> Thank you,  
> Eric M. Williams  
> USACE, New Orleans District  
> Natural and Cultural Resources  
> Analysis Section, CEMVN-PDR-RN  
> Office: 504-862-2862  
> Fax: 504-862-2088

>

>

>

> Classification: UNCLASSIFIED  
> Caveats: NONE

>

>

Classification: UNCLASSIFIED  
Caveats: NONE



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

REPLY TO  
ATTENTION OF:

February 17, 2009

Planning, Programs, and  
Project Management Division  
Environmental Planning  
and Compliance Branch  
Attn: CEMVN-PM-RN

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

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

*Scott Hutcheson* 3-30-09  
Scott Hutcheson Date  
State Historic Preservation Officer

RE: Request to Continue Consultation Under Section 106 of the National Historic Preservation Act for the West Bank and Vicinity Hurricane Protection Project, Hero Canal Levee and Eastern Terminus, Individual Environmental Report #13, Plaquemines Parish, Louisiana.

Dear Mr. Hutcheson:

The U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District, is amending the Area of Potential Effects (APE) for the project area currently being studied under Individual Environmental Report #13, West Bank and Vicinity Hurricane Protection Project, Hero Canal Levee and Eastern Terminus, Plaquemines Parish, Louisiana. This amendment expands the APE into additional areas located along the Hero Canal levee and Eastern terminus. In our letter to your office dated January 26, 2009, the District provided project documentation and a finding of "no historic properties affected" for the original APE. A copy of our letter is attached herein.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), the District, in consultation with the State Historic Preservation Officer (SHPO) and Indian Tribes, will determine if the amended area of potential effects (APE) established for IER #13 contains historic properties. The amended APE includes additional parcels shown as hatched areas on the attached maps (Figures #1 and #2). These parcels include 1) construction staging areas, 2) pile servitude area, 3) existing railroad and highway right of way, 4) new levee right of way, 5) existing Mississippi River levee right of way, 6) new vehicular evacuation route along existing right of way, 7) new floodgate bypass channel area and 8) new gate/levee tie-in area. A floodgate, instead of a vehicular bridge, is proposed for the alignment crossing at Highway 90.



"Williams, Eric MVN"  
<Eric.M.Williams@usace.army.mil>

03/02/2011 07:16 AM

To <Angela\_Trahan@fws.gov>

cc

bcc

Subject RE: Supplement to IER 13 (WBV-9B), Closure of Hero Canal (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Angela,  
Who should I coordinate T&E with for the proposed closure of Hero Canal, and what should I submit? Need to do as soon as possible.

Thanks,  
Eric

-----Original Message-----

From: Angela\_Trahan@fws.gov [mailto:Angela\_Trahan@fws.gov]  
Sent: Monday, February 14, 2011 12:45 PM  
To: Williams, Eric MVN  
Cc: ettinger.john@epa.gov; patrick.williams@noaa.gov  
Subject: Re: Supplement to IER 13 (WBV-9B), Closure of Hero Canal (UNCLASSIFIED)

(See attached file: 20110214\_DraftFWCAREport\_IER13\_HeroCanalClosure.pdf)

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Angela Trahan  
U.S. Fish and Wildlife Service  
Lafayette Field Office  
337/291-3137 ph  
337/291-3139 fax

Inactive hide details for "Williams, Eric MVN"  
<Eric.M.Williams@usace.army.mil>"Williams, Eric MVN"  
<Eric.M.Williams@usace.army.mil>

<Eric.M.Williams@usace.army.mil>

"Williams, Eric MVN"

02/09/2011 10:31 AM

To

<angela\_trahan@fws.gov>

cc

<patrick.williams@noaa.gov>, <ettinger.john@epa.gov>

Subject

Supplement to IER 13 (WBV-9B), Closure of Hero Canal (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Angela,

We are doing a supplement to Individual Environmental Report (IER) #13 for the West Bank and Vicinity Hero Canal and Eastern Tie-In in Plaquemines Parish. The supplement is for the short term closure of Hero Canal to vessel traffic for a maximum of 60 days and a minimum of 30 days intermittently over a 90 day period. The closure is to complete construction on the bulkhead to meet the June 1, 2011 level of risk reduction deadline. The supplement to IER 13 is a HSDRRS project and has a very short time frame for completion. Our schedule would be to go out for 30-day public review from March 9 - April 6, and hopefully have a decision signed by April 12.

The US Fish and Wildlife Service prepared and provided a Fish and Wildlife Coordination Act Report in November 2009 for IER 13, and a Decision Record was signed on 4 December 2009. The proposed action, as described in the Final Addendum to IER #13, begins at Hero Canal south of the confluence of the Algiers and Harvey Canals off of the Gulf Intracoastal Waterway. The first portion of the alignment is referred to as WBV-12, the Hero Canal Levee, which is an earthen levee bordering the north bank of Hero Canal. The alignment then crosses Hero Canal to the south with a closure structure and 70 cubic feet per second pump station in a reach referred to as WBV-9b. The earthen levee to the south and east of the Hero Canal, as well as the 150 cubic feet per second pump station structure is referred to as WBV-9a. As the alignment crosses Highway 23 the closure structures are referred to as WBV-9c. The WBV-9c structures transition into earthen levee (WBV-9a) that tie into the Mississippi River Levee (MRL).

The proposed supplement to the IER 13 would be a closure of Hero Canal to vessel traffic for a short period of time. Regarding the construction of the Hero Canal closure structure (WBV-9b), IER 13 states "During construction the stoplog closure would be built in phases, allowing continuous passage of vessels in the canal."

However, it may now be necessary to close the canal to vessel traffic for an estimated maximum of 60 days and a minimum of 30 days to meet the planned June 1, 2011 level of risk reduction. Closure of the canal could begin as early as 15 April 2011 or as late as 15 May 2011 and end as late as 15 July 2011 if closure is delayed. In summary, the current estimate is forecasting a maximum of 60 days of intermittent closure over a 90 day period that will most likely occur in two events.

The accelerated construction sequencing to meet the June 1, 2011 level of risk reduction indicates that the bulkhead closure structure will be in the final stages of construction in mid April of 2011, but will require future fitting of the stoplogs that must be performed in the dry. The delivery schedule of the stoplogs will determine if it is done with the construction Temporary Retaining Structure (TRS) in place or if a second dewatering of the closure structure will be required using dewatering needles. It is estimated that the fitting of the stoplogs could require a maximum of 30 day to complete after the closure structure is constructed. If this were to occur, the closure of the bypass channel would be delayed well into hurricane season placing the polder at risk of flooding during a storm event. To avert the risk of flooding, the bypass channel closure would be required to begin on April 15, 2011 and the bypass channel temporary retaining system would be

constructed as temporary flood protection to prevent flood waters from entering the Hero Canal. The installation of the temporary retaining system in the bypass channel is estimated to take six weeks to complete and if construction starts on April 15, 2011 it would be in place on June 1, 2011. The original plan allowed time to complete the bulkhead closure structure, including the fitting of the stoplogs, before redirecting canal traffic from the bypass channel to passage through the completed closure structure. The proposed re-sequenced schedule provides 100 year level of risk reduction for the closure structure on June 1, 2011.

The closure of Hero Canal to vessel traffic under this supplement to IER 13 would require no expansion of footprint or additional disturbance. Please email me or call if you have questions or need additional information.

Thank you,  
Eric M. Williams  
USACE, New Orleans District  
Natural and Cultural Resources  
Analysis Section, CEMVN-PDR-RN  
Office: 504-862-2862  
Fax: 504-862-2088

Classification: UNCLASSIFIED  
Caveats: NONE

Classification: UNCLASSIFIED  
Caveats: NONE

**This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,**  
 Will have no effect on those resources  
 is not likely to adversely affect those resources.  
**This finding fulfills the requirements under Section 7(a)(2) of the Act.**

  
\_\_\_\_\_  
Acting Supervisor  
Louisiana Field Office  
U.S. Fish and Wildlife Service

  
\_\_\_\_\_  
Date

BOBBY JINDAL  
GOVERNOR



PEGGY M. HATCH  
SECRETARY

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

FEB 9 2011

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

Attention: Eric Williams

RE: Water Quality Certification (WQC 090128-01/AI 162810/CER 20110001)  
Individual Environmental Report (IER) #13  
Hero Canal Levee & Eastern Terminus revision  
Plaquemines Parish

Dear Mr. Williams:

The Louisiana Department of Environmental Quality (the Department) has reviewed your revised application for the construction of the Hero Canal Levee & Eastern Terminus project (IER #13), in the vicinity of Belle Chasse, Louisiana. This revision concerns the temporary construction and implementation of a stoplog closure in the Hero Canal.

Based on the information provided in the application, the Department made a determination that the requirements for a Water Quality Certification have been met and concludes that the placement of the fill material will not violate water quality standards of Louisiana as provided for in LAC 33:IX.Chapter 11. Therefore, the Department hereby issues a Water Quality Certification to the U.S. Army Corps of Engineers- New Orleans District.

If you have any questions, please call Jamie Phillippe at 225-219-3225.

Sincerely,

A handwritten signature in black ink, appearing to read "Melvin C. Mitchell, Sr.", with a large, stylized flourish at the end.

Melvin C. Mitchell, Sr.  
Administrator  
Water Permits Division

MCM/jjp

**APPENDIX E – LINK TO IER #13**

**<http://www.nolaenvironmental.gov>**