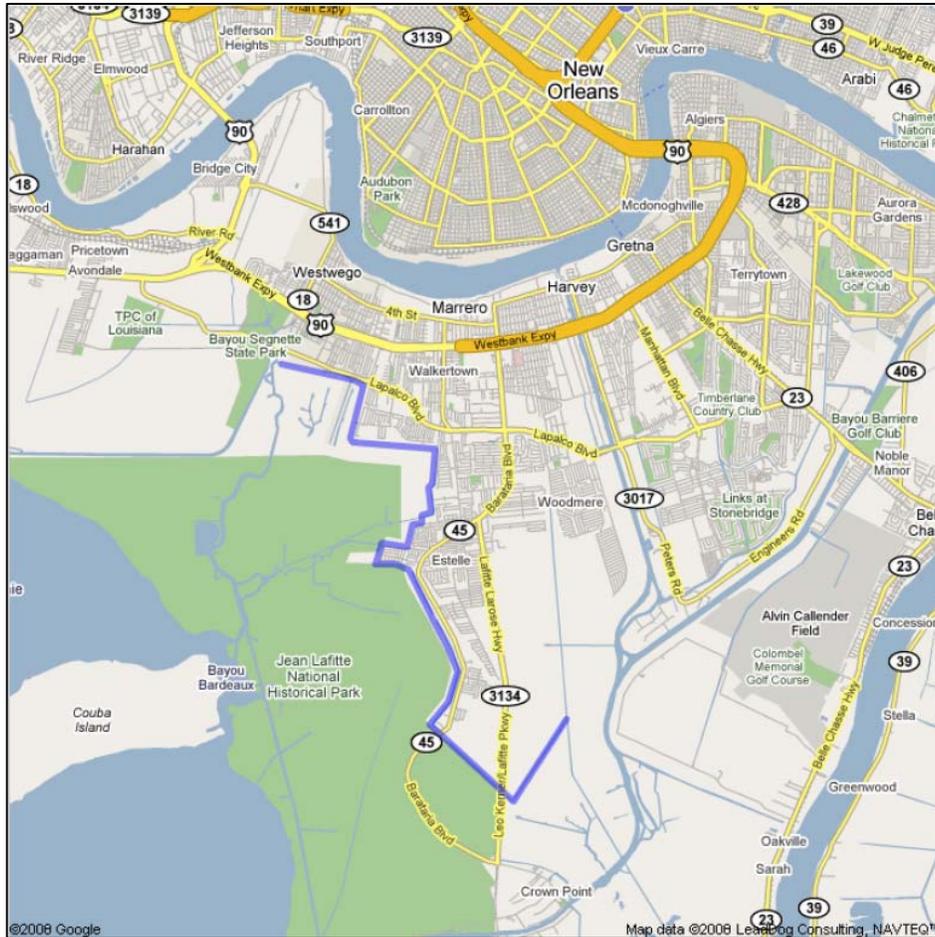


DRAFT INDIVIDUAL ENVIRONMENTAL REPORT SUPPLEMENTAL

WEST BANK AND VICINITY WESTWEGO TO HARVEY LEVEE JEFFERSON PARISH, LOUISIANA

IERS #14.a



**US Army Corps
of Engineers®**

NOVEMBER 2009

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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 Individual Environmental Report Supplemental #14.a (IERS #14.a) to evaluate the potential impacts associated with the proposed project revisions to the original IER #14, Westwego to Harvey project area. The supplemental addresses a proposed flood side shift of approximately 3.29 miles of earthen levees, and proposed revisions to fronting protection and floodwall alignment at the Ames and Mount Kennedy Pumping Stations. After IER #14 was completed the USACE adopted more rigorous design guidelines for the Hurricane Storm Damage and Risk Reduction System (HSDRRS). As a result, the levee in reach WBV-14c.2 and fronting protection and floodwall construction at the Ames and Mt. Kennedy Pumping Stations had to be redesigned in order to achieve the 100-year level of risk reduction. This redesign resulted in a larger footprint than previously required. The proposed action is located in Jefferson Parish, LA. 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 has a 1 percent chance of experiencing each year.

IERS #14.a has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 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 an IER, in lieu of a traditional Environmental Assessment (EA) or Environmental Impact Statement (EIS), is provided for in ER 200-2-2, Environmental Quality (33 CFR §230) Procedures for Implementing the NEPA and pursuant to the CEQ NEPA Implementation Regulations (40 CFR §1506.11). The Alternative Arrangements can be found at www.nolaenvironmental.gov, and are herein incorporated by reference.

The CEMVN implemented Alternative Arrangements on 13 March 2007, under the provisions of the CEQ Regulations for Implementing 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 HSDRRS, formerly known as the Hurricane Protection System (HPS), authorized and funded by Congress and the Administration. 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 August 26, 2008, the District Commander signed the Decision Record for IER #14. IER #14 is incorporated by reference into this supplemental document. Copies of the document and other supporting information are available upon request or at nolaenvironmental.gov. This supplemental document has been prepared to address proposed changes in the Government’s approved plan.

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 institutes, and individuals. Pertinent studies, reports and projects since July 2008 are discussed below. All other relevant reports are listed in IER #14 and are incorporated herein by reference.

West Bank and Vicinity Relevant Reports:

- On 28 September 2009, the CEMVN Commander signed a Decision Record on IER # 30, entitled “Contractor-Furnished Borrow Material #5, St. Bernard and St. James Parishes,

Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with the action taken by commercial contractors as a result of excavating contractor furnished borrow areas for use in construction for HSDRRS.

- On 20 September 2009, the CEMVN Commander signed a Decision Record on IER # 29, entitled “Pre-Approved Contractor-Furnished Borrow Material #4, Orleans, St. John the Baptist, and St. Tammy Parishes, Louisiana.” The document evaluates the potential impacts associated with the action taken by commercial contractors as a result of excavating contractor furnished borrow areas for use in construction for HSDRRS.
- On 31 July 2009, the CEMVN Commander signed a Decision Record on IER # 28, entitled “Government-Furnished Borrow Material #4, Plaquemines, St. Bernard and Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas and an access route for use in construction of the HSDRRS.
- On 12 June 2009, the CEMVN Commander signed a Decision Record on IER # 16, entitled “Western Tie-In, Jefferson and St. Charles Parishes, Louisiana.” IER #16 evaluates the potential impacts associated with constructing levees, floodwalls and a closure structure to meet the 100-year level of risk reduction from the Lake Cataouatche Levee westerly to the Davis Pond Freshwater Diversion’s east guide levee.
- On 18 February 2009, the CEMVN Commander signed a Decision Record on IER # 12, entitled “GIWW, Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana.” IER #12 evaluates the potential impacts associated with raising and/or constructing levee, floodwalls, and other structures to meet the 100-year level of risk reduction for Harvey-Westwego, Gretna-Algiers, and Belle Chase areas.
- On 3 February 2009, the CEMVN Commander signed a Decision Record on IER # 25, entitled “Government Furnished Borrow Material, Orleans, Jefferson and Plaquemines Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRR.
- On 21 January 2008, the CEMVN Commander signed a Decision Record on IER # 17, entitled “Company Canal Floodwall, Jefferson Parish, Louisiana.” The document was prepared to evaluate the proposed construction and maintenance of the 100-year level of hurricane and storm damage risk reduction along the Company Canal from the Bayou Segnette State Park to the New Westwego Pumping Station.
- On 20 October 2008, the CEMVN 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, 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.

2.0 ALTERNATIVES

At the time of the completion of the original IER #14 report, engineer designs had not been finalized for all actions and alternatives. After IER #14 was completed, the USACE adopted more rigorous design guidelines for the HSDRRS. As a result, the WBV-14c.2 levee reach and the Ames and Mt. Kennedy Pumping Stations had to be redesigned in order to achieve the 100-

year level of risk reduction. This redesign resulted in a larger levee footprint than previously required and changes in floodwall design adjacent to the pumping stations. The proposed changes to the project design that would result in additional impacts to the natural or human environment are addressed in this IER Supplemental.

2.1 DESCRIPTION OF THE ALTERNATIVES

No Action. Under the no-action alternative, the Government-approved action, as described in IER #14 would be constructed. The no action alternative was divided into five main reaches for construction; WBV -14c, WBV-14b, WBV-14f, WBV-14d and WBV-14e. Floodwalls including pumping station protection were identified as WBV-30, WBV-37 and WBV-43. All reaches under the no action alternative are listed and Table 1 and labeled in figure 1.

Table 1. Summary of Reaches for IER #14

Reach	Current Elevation (ft)	Future Elevation (ft)	Levee Length (miles)	Floodwall Length* (ft)	Comments
WBV-14c	8-10	14	3.29	485	North Levee
WBV-14b	10-14	14	2.77	576	Orleans Village Pumping Station to Hwy 45
WBV-14f	12	14	2.73	757	Hwy 45 to V-Line Levee
WBV-14d	11	14	n/a	7,008	V-Line Levee Floodwall
WBV-14e	10-12	14	1.78	210	V-Line Levee
WBV-30	9.5-13.6	16	n/a	522	Westminster Pumping Station
WBV-37	16.9	16	n/a	475	Ames Pumping Station
WBV-43	15.8	16	n/a	729	Mount Kennedy Pumping Station

* These lengths pertain to existing floodwalls at utility crossings or pumping stations. Dimensions for new floodwalls may vary slightly.

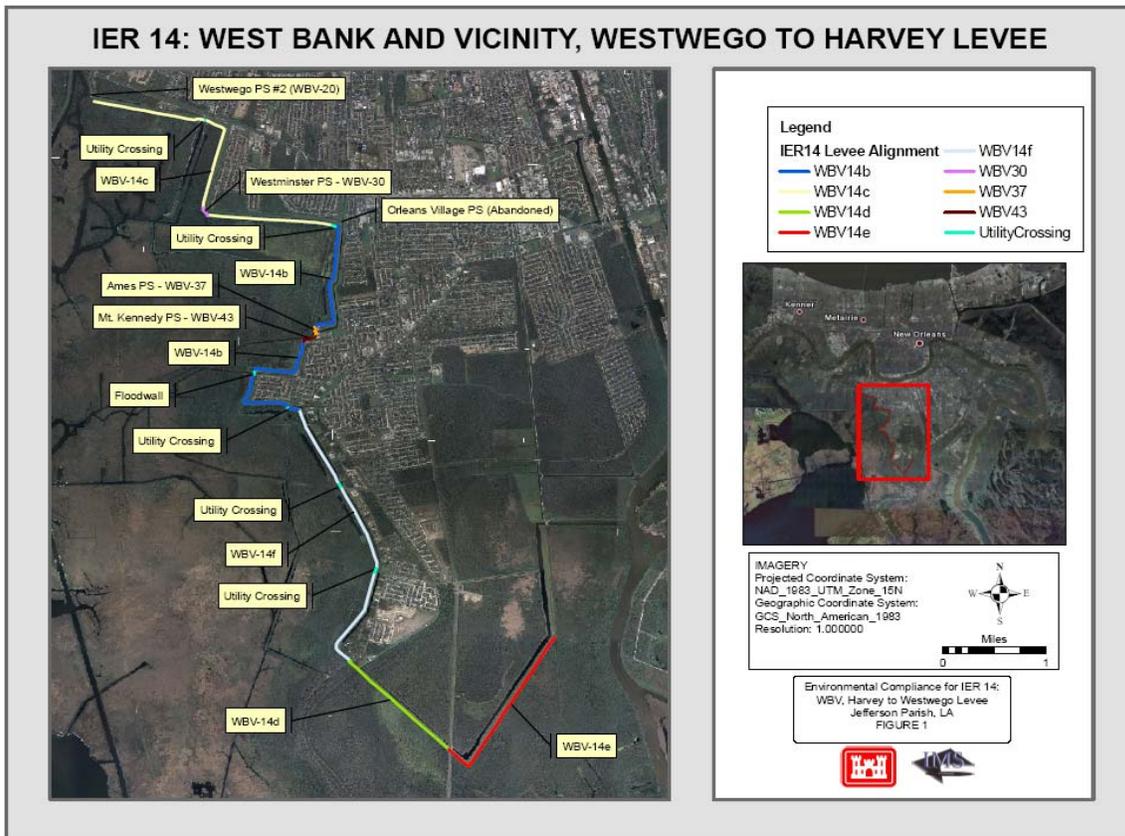


Figure 1. IER #14 Project Area

Proposed Action The proposed action would be instrumental in providing 100-year level of risk reduction. As stated previously, after IER #14 was completed the USACE adopted more rigorous design guidelines for the HSDRRS. As a result, the WBV-14.c.2 levee and the Ames and Mt. Kennedy Pumping Stations had to be redesigned in order to achieve the 100-year level of risk reduction. This redesign resulted in a larger footprint than previously required.

The following reaches would be included in the proposed action:

WBV-14c - North Levee -WBV-14c extends from its western end at the Westwego Pumping Station # 2 to the abandoned Orleans Village Pumping Station

WBV-37 and WBV-43 – Ames and Mt. Kennedy Pumping Stations. The areas immediately adjacent to the Ames and Mt. Kennedy Pumping Stations and a subunit of Reach WBV 14.b that extends from the abandoned Orleans Village Pumping Station to Hwy 45.

WBV-14.c North Levee

No Action

The action approved in IER #14 consists of the construction of an earthen levee enlargement with a protected side shift of the existing levee within the existing ROW. The levee would span a distance of 3.29 miles, would have a width of approximately 150 ft at the base and would be built to an elevation of 14 ft NAVD 88.

The majority of levee construction work would occur on the protected side of the levee, and stability berm work may occur on the flood side. All construction would occur within the existing ROW. The levee work may require geotextile fabric and/or deep soil mixing to strengthen the levee foundation. The deep soil mixing method would involve the blending of a binder such as lime, cement, slag, and fly ash into the soil through a hollow stem auger and mixing tool arrangement to produce round “columns” of treated soil. Applications for this method include stability and support, seepage cutoff, and seismic retrofit. This method has proven to be a viable method to effectively improve the competency of soils in Southeast Louisiana (Woodward 2007). Strengthening of the foundation can also be achieved by installing geotextile fabric in the foundation of the levee.

Proposed Action

The proposed action consists of the construction of an unreinforced earthen levee enlargement (figures 2 and 3). The levee enlargement requires a width of 325 ft at the base. The centerline of the levee would have a 40 foot flood side shift from the previously approved alignment. The proposed alignment would require a 100 foot width of new ROW along the flood side of the entire 3.29 miles reach. Approximately 42 acres of new ROW would be impacted by the proposed levee shift and enlargement. The levee would be built to an elevation of 14 ft NAVD 88. The additional 100 foot width on the flood side would include levee, stability berm and vegetative free zone. Due to system-wide risk and reliability requirements, the existing levee would not be degraded to place geotextile fabric. Approximately 675,000 cubic yards of compacted fill (table 2) would be placed as fill to construct the proposed levee enlargement. Material would be acquired from a government furnished or contractor furnished borrow pit.



WBV-14C.2 PROPOSED ACTION



Figure 2. WBV-14.c.2 Proposed Action

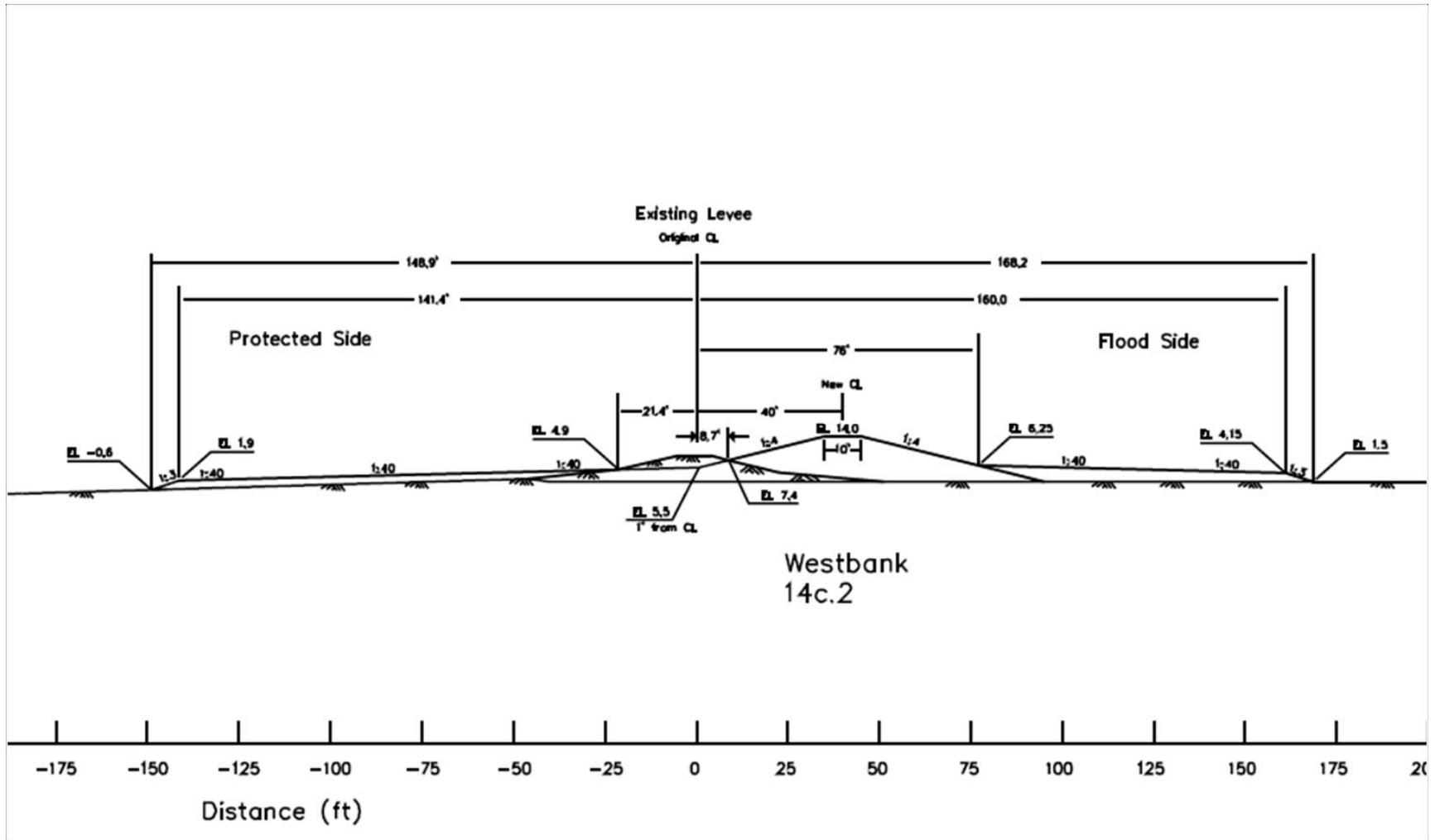


Figure 3. WBV-14.c.2 Cross-sectional view

Table 2. Estimates Major Construction Material Quantities Required Reach WBV-14.c.2

Material	Quantity*	Unit
Levee- Compacted Fill	675,000	Embankment Cubic Yards (in place)
Estimated Construction Duration (including adverse weather days)	426	Calendar Days

*Quantities are strictly estimates. Source: USACE, Cost Engineering Team

WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

No Action

Fronting protection would be built at the Ames and Mount Kennedy Pumping Stations and floodwalls would be constructed at the utility crossings within this reach. The floodwalls at the utility crossings would total 576 ft, and would tie-in to the earthen levees on either end.

The majority of levee construction work would occur on the flood side of the levee, and stability berm work may occur on the protected side. All levee construction would occur within the existing ROW. The levee work may require geotextile fabric and/or deep soil mixing to strengthen the levee foundation.

The Ames Pumping Station (WBV-37) discharges into the Millaudon Canal. This pumping station has two 84-inch, 300 cubic feet per second (cfs) vertical pumps, four 72-inch, 300 cfs vertical pumps, and one 132-inch, 1,050 cfs horizontal pump. Water passes through steel discharge tubes and empties into a discharge basin. The Ames Pumping Station walls were constructed to an elevation of 16.9 ft NAVD 88. Although some existing floodwall heights of protection appear adequate, the walls do not meet the new geotechnical and structural design criteria.

The action for WBV-37 includes the construction of a continuous line of risk reduction within the existing ROW, which would tie-in to the existing levees on either side, with limited effects on the existing pumping station. This protection would incorporate use of pile-founded reinforced concrete floodwalls/sluice gate structure, constructed to an elevation of 16.0 ft NAVD 88 across the pumping station discharge basin, and 14 ft NAVD 88 at the levee tie-in points. Structural superiority of 2 ft is included in the wall height within the pumping station discharge basin.

The Mount Kennedy Pumping Station (WBV-43) also discharges into the Millaudon Canal. This pumping station has three 48-inch, 500 cfs vertical pumps. Water passes through steel discharge tubes and empties into a discharge basin. The Mount Kennedy Pumping Station walls were constructed to an elevation of 15.80 ft NAVD 88 in front of the station and at an approximate elevation of 15.80 ft NAVD 88 at the tie-in walls. Although some existing floodwall heights appear adequate, the walls do not meet the new geotechnical and structural design criteria.

The action for WBV-43 includes the construction of a continuous line of risk reduction, partially outside of the existing ROW, which would tie-in to the existing levees on either side, with limited effects on the existing pumping station. Permanent additional ROW would be required on both the flood side and protected side of the project to implement

the improvements. The current plan shows a range of 40 ft to 50 ft of additional permanent ROW that would be required along the length of the protected side of the

AMES & MT KENNEDY PUMPING STATIONS PROPOSED ACTION



Figure 4. Ames and Mt. Kennedy Pumping Stations Proposed Action

project. On the flood side of the project, a range of 10 ft to 20 ft of additional permanent ROW would be required on the south side of Millaudon Canal.

The action approved in IER #14 would incorporate the use of pile-founded reinforced concrete floodwalls, constructed to an elevation of 16 ft NAVD 88 across the pumping station discharge basin, and 16 ft NAVD 88 at the levee tie-in points. Structural superiority of 2 ft is included in the wall height within the pumping station discharge basin.

Proposed Action

The proposed action includes construction of fronting protection at the Ames and Mt. Kennedy Pumping Stations, levee tie-in walls and floodwalls in front of and between the stations. A total of 1,204 linear feet of floodwalls would be constructed in this reach. The proposed action also includes modifications to pumping station machinery.

The proposed action for the Ames Pumping Station includes the modification of Pumping Station machinery, the construction of new T-walls and demolition of existing floodwalls. The Ames Pumping Station would have two 84 inch, 390 cfs vertical pumps and one 132 inch, 1150 cfs horizontal pump which discharges into the Millaudon Canal. The 390 cfs pump would discharge water through 84 inch steel tubes and the 1150 cfs horizontal pump would discharge water through a 132 inch reinforced concrete tube. The Ames Pumping Station walls would be constructed to an elevation of 16.9 ft NAVD 88. Less than 0.2 additional acres of Millaudon Canal bottom would be acquired as new ROW for the construction of the discharge monolith

Immediately north of the Ames Pumping Station a new T-Wall approximately 280 ft in length would be constructed from the pumping station to tie into the WBV-14-b levee (figure 3). The new T-wall would have between a 20 to 55 ft shift flood side of the existing floodwall and would be constructed to an elevation of 14 feet NAVD 88. The T-wall would be constructed within existing ROW on previously disturbed land and into the Millaudon Canal. Filling would occur in the portion of the Millaudon Canal located between the new floodwall and the existing canal bankline. Approximately 0.18 acres of previously disturbed land and 0.14 acres of Millaudon Canal would be filled by floodwall construction. Earthen material would be acquired from either government or contractor furnished borrow pits and would be hauled in from offsite. The existing floodwalls would be demolished and the debris would be hauled offsite to an approved waste disposal facility or recycled. Riprap would also be removed along the bankline areas where the alignment would be shifted flood side. For a listing of demolition quantities for both Ames and Mount Kennedy reaches see table 4.

A new T-wall also would be constructed between the Ames and Mt. Kennedy Pumping Stations. The T-wall would be approximately 644 ft long with a 60 ft long gate monolith and a 30 foot gate opening. The T-wall would be constructed to an elevation of 14 ft NAVD 88. The new T-wall would be shifted flood side a distance ranging from 20 to 50 ft from the existing floodwall. Approximately 0.52 acres of previously disturbed land and 0.14 acres of Millaudon Canal would be filled by floodwall construction. The existing flood wall located between the pumping stations would be demolished and the debris would be hauled offsite to an approved waste disposal facility or recycled. On the flood side of the Mount Kennedy Pumping Station sheet pile would be driven to construct a temporary retaining structure. The retaining structure would act like a dam isolating the work area from the canal and enable the work to proceed in a dry condition. After construction activities are complete the temporary retaining structure would be removed. The Mount Kennedy Pumping Station would have three 167 cfs vertical pumps which discharge between three 48-inch discharge tubes. Less than 0.2 additional acres of Millaudon Canal bottom would be acquired as new ROW for the discharge monolith. An additional 0.28 acres of temporary work easement would be acquired in the Millaudon

Canal for the placement of temporary retention structures used for de-watering. Immediately west of the Mt. Kennedy pumping station an approximately 280 length of T-wall would be constructed to tie-in the western end of the Mt. Kennedy pumping station with the WBV-14b levee. For construction quantities see table 3.

A discharge scour slab would be removed at the Mt. Kennedy pumping station outfall. Bottom paving would be placed at the outfall of the Ames and Mt. Kennedy pumping stations filling less than 0.5 acres of Millaudon Canal bottom and previously disturbed bankline.

Table 3. Estimates of Major Construction Quantities for Ames (WBV-37) and Mt. Kennedy (WBV-43) Pumping Stations

Material	Quantity*	Unit
Concrete	4,451	Cubic Yards
Sheet Pile	44,510	Square Feet
H-Pile	45,360	Vertical Linear Feet
Levee-Compacted Fill	8,770	Embankment Cubic Yards (in place)
Estimated Construction Duration (including adverse weather days)	600	Calendar Days

*Quantities are strictly estimates. Source: USACE, Cost Engineering Team

Table 4. Estimate of Demolition Quantities for Ames and Mt. Kennedy Pumping Stations Floodwalls

Material	Quantity*	Unit
Concrete	4,115	Cubic Yards
Sheet Pile	106	Cubic Yards
Timber Piles	95	Cubic Yards
Rip Rap	3,750	Tons

*Quantities are strictly estimates. Source: USACE, Cost Engineering Team

Construction related activities

Site preparation for construction of the earthen levee enlargement would require clearing vegetation, grubbing and stripping topsoil with the footprint of the new levee ROW. The clearing and grubbing of the vegetation and topsoil stripping would be necessary to ensure that trees, roots and topsoil zones do not provide weak path planes where water seepage could jeopardize the integrity of the levee. Removed vegetation would be trucked offsite for disposal or beneficial reuse, chipped or burned in situ. The material may be deposited and stored onsite in a manner to ensure materials would not be eroded and if placed onsite would be placed within the ROW in the no vegetation zone. Other debris resulting from clearing and grubbing of the site would be removed from the site and reasonable efforts would be made to channel merchantable material into a commercial market. If not merchantable, the material would be deposited into a commercial disposal facility. After clearing and grubbing, the site may need to be demucked prior to construction. If demucking is necessary and the material is not suitable to be used for fill in the levee cross section, the material would be placed within the ROW and spread in the no vegetation zone or hauled off to an approved commercial disposal site.

For all construction under the proposed action, earthen fill material would be obtained from government furnished borrow or contractor furnished areas that were previously evaluated in a borrow IER. Borrow material would be stockpiled, as needed within the proposed widened levee alignment. The material would be stockpiled and processed within the levee ROW.

Levee construction activities would utilize a large number and variety of construction equipment including cranes, excavators, dump trucks, bulldozers, graders, tractors, front end loaders, water trucks and a variety of trucks. Significant amounts of earthen fill would be transported, and stockpiled on site.

2.2 DESCRIPTION OF THE ALTERNATIVES

2.2.1 No action alternative WBV-14.c.2 Earthen Levee and WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

Without implementation of the proposed action, the government's approved action, described as the no action alternative throughout, would be constructed. However, based on more rigorous design guidelines adopted the USACE for the HSDRRS in late 2008, construction of the no action alternative would not achieve a 100- year level of risk reduction. Reference section 2.1 for a more detailed description of the approved action.

2.2.2 Earthen Levee (Unreinforced) with landside shift (WBV-14.c.2)

This alternative is comprised of an 80 ft wide landside shift along the entire length of the levee alignment and additional landside shift where the existing landside drainage canal would require relocation. Additional ROW would be required to construct this alternative.

2.2.3 Floodwall (WBV-14.c.2)

This alternative is comprised of constructing a floodwall within the existing levee alignment. No additional ROW would be required to construct this alternative.

2.2.4 WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

The proposed action for the Ames and Mt. Kennedy Pumping Stations is a redesign to meet the more rigorous design guidelines; as a result, alternatives were not formally developed or evaluated. During the redesign process, however, designs that impacted the adjacent Jean Lafitte Nation Historical Park and Preserve-Barataria Preserve Unit (JLNHPP) lands were eliminated from consideration.

2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

2.3.1 WBV-14.c.2 Earthen Levee (Geotextile Reinforced)

This alternative was eliminated due to the inability to provide interim flood protection during levee degrade which would be necessary to install the geotextile reinforcement.

2.3.2 WBV-14.c.2 Earthen Levee (Geotextile Reinforced) shifted landside with culvert in landside drainage canal

This alternative is comprised of degrading the existing levee, placing geotextile fabric and then constructing a new levee with a landside shift and installing a culvert in existing landside drainage canal. This alternative was eliminated due to the inability to provide interim flood protection during levee degrade, significant direct impacts to the adjacent residential community, the need to relocate a portion of Lapalco Boulevard and the long duration and constructability issues related to relocating homes and some protected side wetlands impacts.

2.3.3 WBV-14.c.2 Earthen Levee with soil mixing columns.

This alternative involves mixing or injecting soil additives to existing levee that strengthen the physical properties of the soil. This alternative was eliminated because of cost.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 ENVIRONMENTAL SETTING

IER #14 contains a complete discussion of the environmental setting for the project area and is incorporated by reference into this document. As such, no discussion of environmental setting 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 or indirectly, by the proposed modifications to the Government approved actions, as discussed in IER #14. Direct impacts are those that are caused by the action taken and occur at the same time and place (40 CFR §1508.8(a)). Indirect impacts are those that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR §1508.8(b)). Cumulative 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 actions (40 CFR §1508.7).” Cumulative impacts are discussed in section 4.

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of national, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Table 5. shows those significant resources found within the project area, and notes whether they would be impacted by the proposed action analyzed in this IER Supplemental.

Existing conditions for significant resources were discussed in IER #14 and are incorporated by reference.

Table 5. Significant Resources in the Project Area

Significant Resources	Impacted	Not Impacted
Bottomland Hardwood Forests		☑
Cypress-Tupelo Swamp	☑	
Fisheries and Aquatic Habitat	☑	
Wildlife	☑	
Threatened & Endangered Species		☑
Air Quality	☑	
Water Quality	☑	
Cultural Resources		☑
Recreation		☑
Aesthetics		☑
Socioeconomics	☑	

3.2.1 Cypress-Tupelo Swamp (Wetlands)

Future Conditions with No Action

Under the No action alternative the Government’s approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on wetlands would not differ from those described in IER #14. Approximately 29.75 acres of cypress-tupelo swamp would be impacted by the construction activities described in IER #14.

Future Conditions with the Proposed Action

WBV-14.c.2 Levee centerline shift flood side and levee enlargement

Direct Impacts

An additional 42 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee flood side shift and enlargement. The proposed filled area for WBV-14.c.2 levee enlargement is part of the Commercial Investment Trust (CIT) Tract. The CIT Tract consists of wetlands adjacent to Bayou Segnette, owned by the Federal Government and is considered medium to high quality swamp (National Park Service 2004). The filling of 42 acres of cypress-tupelo swamp for the construction of the levee enlargement would significantly reduce the areas wildlife habitat value and eliminate the flood storage and water quality function of these areas.

The passage of the Omnibus Public Lands Management Act in April 2009 authorized the transfer of these lands from the USACE to the National Park Service for inclusion in the JLNHPP (Times Picayune 2009). When this area is incorporated into JLNHPP, the area will be located in a remote section of the park that has limited road access. Construction

activities would be relatively short in duration and should not impact high use park areas with visitor facilities.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have effects on habitat.

Cumulative Impacts

Filling of the 42 acres of cypress-tupelo swamp would contribute to the cumulative loss of wetland resources within the ecosystem. These wetlands would be mechanically cleared, grubbed and filled and would require mitigation.

Future Conditions with Alternative

Earthen Levee (Unreinforced) with Landside Canal Shift

Direct Impacts

Approximately 16.5 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee and canal land side shift and enlargement. Although the swamp is located on the protected side of the levee, the area provides wildlife habitat and local flood water storage.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat and would not be permanent.

Cumulative Impacts

Filling of the 16.5 acres of protected side cypress-tupelo swamp would contribute to the cumulative loss of wetland resources in southeast Louisiana. However, these wetlands were previously enclosed and hydrologic connections to adjacent flood side wetlands have been modified. The clearing, grubbing and filling or excavating of these wetlands would require mitigation.

Future Conditions with Alternative

Floodwall

Direct, Indirect and Cumulative Impacts

The floodwall would be constructed with the existing levee alignment and would require no additional ROW. There would be no impact to cypress-tupelo swamp.

Future Conditions with the Proposed Action

WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

Direct, Indirect and Cumulative Impacts

The area impacted by the proposed action for this reach involves previously impacted shoreline and canal bottoms. There would be no additional direct, indirect or cumulative cypress-tupelo swamp impacts associated with the Ames and Mt. Kennedy Pumping Station activities.

3.2.2 Fisheries and Aquatic Habitat

Future Conditions with No Action

Under the No Action alternative the Government's approved action as discussed in IER#14 would be constructed. Consequently, direct, indirect, and cumulative impacts on fisheries and aquatic habitat would not differ from those described previously in IER #14.

Future Conditions with the Proposed Action

WBV-14.c.2 Levee centerline shift flood side and levee enlargement

Direct Impacts

Approximately 42 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee flood side shift and enlargement. Aquatic organisms and habitat located within the flooded swamp would be adversely impacted by the filling of the swamp for levee construction. Additionally the drainage canal located flood side of the existing levee alignment would be filled. The drainage canals located adjacent to the levee toe support viable fisheries and aquatic habitat; however, these organisms are dominated by low dissolved oxygen species. Once filled, the swamp and drainage canal would be lost as future habitat for aquatic organisms. Motile organisms would avoid construction activities and seek refuge in adjacent flooded swamp. Sessile organisms would be unable to avoid construction activities and would be eliminated.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat.

Cumulative Impacts

Filling of the 42 acres of cypress-tupelo swamp would contribute to the cumulative loss of aquatic resources within the ecosystem. These areas would be mechanically cleared and grubbed and would require mitigation. Construction of the proposed action would contribute to the cumulative loss of flooded areas within the cypress-tupelo swamp and open water in the drainage canal immediately adjacent to the levee alignment.

Future Conditions with Alternative

Earthen Levee (Unreinforced) with Landside Canal Shift

Direct Impacts

Approximately 16.5 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee enlargement, and a reach of the adjacent Mayronne Canal would be filled and reconstructed to the land side. The swamp is located on the protected side of the levee and while adjacent to Mayronne Canal the swamp is not or is minimally

hydrologically connected to the adjacent canals. The Mayronne Canal and other canals located adjacent to the swamp generally are inhabited by fish and other aquatic species that are tolerant of low dissolved oxygen. The filling of the swamp and filling and relocation of the canal would displace motile aquatic species. Motile organisms would avoid construction activities and seek refuge in adjacent flooded swamp or adjacent areas within the canal system. In some cases fishes located within the swamp could be isolated in pockets of flooded swamp.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat. Other indirect impacts would include local increased turbidity, and decreased dissolved oxygen.

Cumulative Impacts

Filling of approximately 16.5 acres of protected side cypress-tupelo swamp and filling and relocation of section of the Mayronne Canal would contribute to the cumulative loss of fisheries and aquatic habitat in southeast Louisiana. However, the protected side swamp is not hydrologically or is minimally hydrologically connected; therefore, filling would impact local populations of aquatic organisms in those cases where filling results in isolating organisms. Since the fish located in the swamp are already locally isolated from the flood side populations, the filling of these areas and relocation of the canal would not significantly impact fish aquatic populations in southeast Louisiana. The clearing, grubbing and filling or excavating of the swamp would require mitigation.

Future Conditions with Alternative

Floodwall

Direct, Indirect and Cumulative Impacts

The floodwall would be constructed within the existing levee alignment and would require no additional ROW. Because no new ROW is required, there would be no direct impacts from the floodwall construction. The indirect effects of construction (e.g. noise, fugitive dust etc.) would have temporary effects on habitat. Other indirect impacts would include local increased turbidity, and decreased dissolved oxygen. There would be no significant cumulative impacts associated with floodwall construction.

Future Conditions with the Proposed Action

WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

Direct Impacts

Approximately 1.1 acres of Millaudon Canal bottom would be permanently filled with paving materials and rip-rap and 0.28 acres of Millaudon Canal bottom would be temporarily filled by the construction of temporary retention structures. Placement of rip-rap or paving would result in an elimination of open water in some areas and a decrease in water depths in other areas. Motile organisms would attempt to avoid construction activities. Sessile organisms unable to vacate the area would be eliminated. Following the completion of work, motile organisms would be able to recolonize areas where open water remained although at a reduced depth. Sessile organisms also would be able to repopulate these same areas. Following the removal of the temporary retention

structures both motile and sessile organisms would be able to recolonize those areas. The area impacted by the proposed action for this reach involves areas adjacent to previously impacted shoreline and canal bottoms adjacent to the pumping stations. These areas are receiving waters for pumping station discharges.

Indirect Impacts

Indirect impacts would include some localized increase in water temperature where bottom depths are significantly reduced, increased local turbidity, decreased dissolved oxygen levels, vibrations and subsurface noise. Conditions in adjacent waters would return to normal following cessation of construction activities.

Cumulative

Construction of the proposed action would result in minor cumulative impacts due to the loss of aquatic habitat in open water areas adjacent to the pumping stations that would be filled as a part of construction activities. Impacts would be expected to be localized, with no long term impacts to the aquatic ecosystem or its resident flora and fauna. Construction of the proposed action would contribute to the cumulative losses of fisheries and aquatic resources in the HSDRRS.

3.2.3 Wildlife

Future Conditions with No Action

Under the No Action alternative the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on wildlife would not differ from those described previously in IER #14.

Future Conditions with the Proposed Action

WBV-14.c.2 Levee centerline shift flood side and levee enlargement

Direct Impacts

Under this alternative, the levee would be shifted flood side and enlarged and would result in the conversion of approximately 42 acres of cypress-tupelo swamp to levee, levee berm and vegetative free zone and would no longer provide the high quality nesting and foraging habitat that currently exist at the project site.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat.

Cumulative Impacts

Filling of the 42 acres of cypress-tupelo swamp would contribute to the cumulative losses of wildlife resources within the ecosystem. The areas would be mechanically cleared and grubbed and would require mitigation. Construction of the proposed action would not result in significant cumulative impacts but would contribute to cumulative losses of wildlife resources within the HSDRRS.

Future Conditions with Alternative

Earthen Levee (Unreinforced) with Landside Canal Shift

Direct Impacts

Approximately 16.5 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee and canal land side shift and enlargement. Although the swamp is located on the protected side of the levee, the area provides nesting and foraging wildlife habitat.

Indirect Impacts

The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat.

Cumulative Impacts

Filling of the 16.5 acres of protected side cypress-tupelo swamp would contribute to the cumulative loss of wildlife habitat in southeast Louisiana. Even though these areas are enclosed by levees they provide nesting and foraging areas. Construction of the alternative would not result in significant cumulative impacts to wildlife habitat but would contribute to cumulative losses of wildlife habitat in the HSDRRS area.

Future Condition with Alternative

Floodwall

Direct, Indirect and Cumulative Impacts

The floodwall would be constructed with the existing levee alignment and would require no additional ROW. Wildlife movement along the 3.29 mile length of the floodwall would be impacted, but impacts could be decreased by the construction of earthen ramps or similar features for wildlife crossings. The indirect effects of construction (e.g., noise, fugitive dust etc.) would have temporary effects on habitat. The construction of the floodwall would not require additional ROW and would not contribute to cumulative losses to wildlife habitat.

Future Conditions with the Proposed Action

WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Station

Direct Impacts

Approximately 1.1 acres of Millaudon Canal bottom would be permanently filled with paving materials and rip-rap and 0.28 acres of Millaudon Canal bottom would be temporarily filled by the construction of temporary retention structures. The area is adjacent to the Ames and Mt. Kennedy Pumping Stations and has already been significantly disturbed and is medium to low quality habitat. Wildlife resident to the canal and canal bankline would relocate during construction activities. Once construction activities were complete, shorebirds and other wildlife would repopulate the construction area. Since the area has been previously impacted by construction and the continued operation of the pumping stations it is a low to medium quality habitat.

Indirect

Indirect impacts would include some localized increase in noise and decrease in air and water quality. Conditions at the project site would return to normal following cessation of construction activities.

Cumulative Impacts

Construction of the proposed action would result in minor cumulative impacts due to the loss wildlife habitat. Impacts would be localized, with no long term impacts to the local aquatic ecosystem. The proposed action would not result in significant cumulative impacts but would contribute to the cumulative losses wildlife habitat in the HSDRRS.

3.2.4 Threatened and Endangered Species

Future Conditions with No Action

Under the No Action alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on threatened and endangered species would not differ from those described previously in IER #14.

Future Conditions with the Proposed Action all reaches

Under the proposed actions for all reaches, no listed endangered, threatened, or candidate species are known to exist in the potential project impact areas. Therefore, no direct, indirect, or cumulative effects would be predicted to protected species or their critical habitat as a result of implementing the proposed actions. The USFWS concurred with the USACE's determination that project implementation would not adversely affect any threatened and endangered species or their critical habitat in their letter dated 2 September 2009.

3.2.5 Air Quality

Future Conditions with No Action

Under the No Action alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently direct, indirect and cumulative impacts to air quality would not differ from those previously described in IER #14.

Future Conditions with the Proposed Action all reaches

Under the proposed action for all reaches there would be a further increase in direct, indirect and cumulative impacts to air quality due to the increase in contract durations. The proposed action would contribute to the cumulative losses of air quality within the HSDRRS.

3.2.6 Water Quality

Future Conditions with No Action

Under the No Active alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on water quality would not differ from those described previously in IER #14.

Future Conditions with the Proposed Action

WBV-14.c.2 Levee centerline shift flood side and levee enlargement

Direct Impacts

Approximately 42 acres of cypress-tupelo swamp and drainage canals located immediately adjacent to the existing levee toe would be filled for levee enlargement. Filling of the wetlands and drainage canal would permanently eliminate the affected wetlands' ability to perform water quality functions. Temporary increases in turbidity levels would occur in the adjacent swamp. Motile organisms would be able to relocate to nearby swamp to avoid turbidity impacts. After construction activities turbidity levels would return to normal in adjacent swamp.

Indirect Impacts

The indirect effects of construction would include runoff caused by poor sediment management. Some indirect impacts could be avoided by the implementation of best management practices and sediment control plans implemented during construction activities.

Cumulative Impacts

Filling of the 42 acres of cypress-tupelo swamp would contribute to the cumulative loss of water quality function within the ecosystem but would not result in significant cumulative impacts to water quality.

Future Condition with Alternative

Earthen Levee (Unreinforced) with Landside Canal Shift

Direct Impacts

Approximately 16.5 acres of cypress-tupelo swamp would be cleared, grubbed and filled as part of the levee and canal land side shift and enlargement. Filling of the wetlands and drainage canal would permanently eliminate the affected wetlands ability to perform water quality functions. Temporary increases in turbidity levels would occur in the adjacent swamp. Motile organisms would be able to relocate to nearby swamp to avoid turbidity impacts. After construction activities turbidity levels would return to normal in adjacent swamp.

Indirect Impacts

The indirect effects of construction would include runoff caused if sediment is not properly managed. Some indirect impacts could be avoided by the implementation of best management practices and sediment control plans implemented during construction activities.

Cumulative Impacts

Filling of the 16.5 acres of protected side cypress-tupelo swamp would contribute to the cumulative loss of water quality function within the ecosystem but would not result in significant cumulative impacts to water quality because these areas are previously enclosed and are either not hydrologically connected to wetlands located outside of the HSDRRS or are only minimally connected to wetlands located outside of the HSDRRS.

Future Condition with Alternative

Floodwall

Direct, Indirect and Cumulative Impacts

The floodwall would be constructed within the existing levee alignment and would require no additional ROW. There would be temporary impacts to water quality, but these impacts would not result in significant cumulative impacts to water quality function within the ecosystem.

Future Conditions with the Proposed Action

WBV-37 and WBV-43 Ames and Mt. Kennedy Pumping Stations

Direct Impacts

Approximately 1.1 acres of Millaudon Canal bottom would be permanently filled with paving materials and rip-rap. Placement of rip-rap would result in temporary increases in turbidity levels. Motile organisms would be able to relocate to adjacent areas in the canal to avoid these turbidity increases. Following the completion of, work turbidity levels would return to normal. The area impacted by the proposed action for this reach involves areas adjacent to previously impacted shoreline and canal bottoms adjacent to the pumping stations. These areas are receiving waters for pumping station discharges including storm water runoff which at times may include raw or partially treated wastewater.

Indirect Impacts

Indirect impacts would include runoff caused by poor sediment management during excavation activities. Implementation of best management practices would reduce indirect impacts during construction activities.

Cumulative Impacts

Construction of the proposed action would result in minor cumulative impacts to aquatic open water areas adjacent to the pumping stations. These impacts would be short term and localized. Construction of the proposed action would not result in significant cumulative impacts to water quality in the HSDRRS.

3.2.7 Cultural Resources

Future Conditions with No Action

Under the No Action alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on cultural resources would not differ significantly from those described previously in IER #14. Under the no action alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently direct, indirect, and cumulative impacts on cultural resources for the Government's approved action would not differ significantly from those described previously in IER #14. In letters sent to the State Historic Preservation Officer (SHPO) and Indian Tribes dated 12 December 2007, CEMVN provided project documentation, evaluated cultural resources potential in the project area, and found that the Government's approved action would have no impact on cultural resources. The SHPO, Choctaw Nation of Oklahoma, and the Chitimacha Tribe of Louisiana concurred with our "no historic properties affected" finding in letters dated 23 January 2008, 26 December 2007, and 27 December 2007, respectively. No other Indian Tribes responded to our request for comments. Section 106 consultation for the Government's approved action is concluded.

Future Conditions with the Proposed Action

WBV-14.c.2 Levee centerline shift flood side and levee enlargement

Direct Impacts

Under the proposed action, levee enlargement construction would be shifted to the flood side of the levee centerline. In the initial cultural resources investigation conducted by Coastal Environments, Inc., for the IER #14 study area, researchers utilized background research, previous cultural resources investigation review, soil and topographic analyses, field reconnaissance data and Phase 1 investigations to identify and assess historic structures and high potential areas for archaeological resources. Researchers identified three areas exhibiting a high potential for archaeological sites that extended into the proposed action project area (Wells 2007). Subsequent Phase 1 field investigations did not identify any cultural resources in these three high probability areas (Wells 2009). Based on the review of state records, previous cultural resources studies, and the results of the Wells' 2009 Phase 1 investigations, implementation of the proposed action would have no direct impact on cultural resources.

The CEMVN held meetings with the SHPO staff and Tribal governments to discuss the emergency alternative arrangements approved for NEPA compliance. The CEMVN formally initiated Section 106 consultation for the WBV Project (100-year), which includes IER # 14, in a letter dated 9 April 2007. In letters sent to the SHPO and Indian Tribes dated 20 July 2009, the CEMVN provided project documentation, conducted Phase 1 cultural resource investigations in the project area, and found that the proposed action would have no impact on cultural resources. The SHPO, Quapaw Tribe of Oklahoma, Seminole Tribe of Florida, Choctaw Nation of Oklahoma, and the Alabama-Coushatta Tribe of Texas concurred with our "no historic properties affected" finding on 18 August 2009, 23 July 2009, 29 July 2009, 30 July 2009, and 14 August 2009, respectively. No other Indian Tribes responded to our request for comments. Section 106 consultation for the proposed action is concluded. However, if any unrecorded cultural resources are determined to exist within the proposed project boundaries, then no work would proceed in the area containing these cultural resources until a CEMVN archaeologist has been notified and final coordination with the SHPO and Indian Tribes has been completed.

Indirect Impacts

Implementation of the proposed action could provide an added level of protection to known and unknown archaeological sites in the project vicinity on the protected side of the levee by reducing the damage caused by flood events. Erosion of ground deposits during flood events can result in severe damage and destruction of archaeological sites.

Cumulative Impacts

Implementation of the proposed action would have beneficial cumulative impacts on identified historic properties in the west bank metropolitan area. This proposed action is part of the ongoing Federal effort to reduce the threat to properties posed by flooding. The combined effects from construction of the multiple projects underway and planned for the WBV portion of the HSDRRS would reduce flood risk and storm damage to significant archaeological sites, individual historic properties, engineering structures and historic districts.

Future Condition with Alternative

Earthen Levee (Unreinforced) with Landside Canal Shift

Direct Impacts

The earthen levee with the enlargement and landside levee and canal shift would impact an additional area approximately 100 ft wide immediately landward of the existing levee ROW. Within that area are 16.5 acres of cypress tupelo swamp and 25.5 acres of previously impacted or developed land which includes canal bottoms, residential subdivisions and existing infrastructure including portions of Lapalco Boulevard. This alternative project area was evaluated for cultural resources by Dr. Douglas Wells in 2007 and two areas exhibiting a high potential for archaeological sites were identified. Proposed construction activities within the alternative boundaries would directly impact these high probability areas. Additional cultural resources investigations and consultation with the SHPO and Federally recognized Indian tribes will be required in order to conclude Section 106 requirements under the National Historic Preservation Act of 1966.

Indirect and Cumulative Impacts

Indirect and cumulative impacts from this alternative would be essentially the same as those described for the proposed action.

Future Condition with Alternative

Floodwall

Direct, Indirect and Cumulative Impacts

Direct, Indirect and cumulative impacts from this alternative would be essentially the same as those described for the no action alternative, as the floodwall would be constructed with the existing levee alignment and would require no additional ROW.

3.2.8 Recreation

Future Conditions with No Action

Under the No Action alternative, the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct, indirect, and cumulative impacts on recreation would not differ from those described previously in the original IER.

Future Conditions Proposed Action all reaches

Direct and Indirect Impacts

Under the proposed action, the levee enlargement would be constructed on the flood side of the existing levee outside the existing ROW. The Commercial Investment Trust (CIT) Tract is partially located on the flood side of this reach. The CIT Tract consists of wetlands adjacent to Bayou Segnette and JLNHPP, and is owned by the Federal government. The passage of the Omnibus Public Lands Management Act in April 2009 authorized the transfer of these lands from the USACE to the National Park Service (Times Picayune Article 2009). Levee construction would result in the fill and conversion of approximately 42 acres of future park lands from cypress tupelo swamp. These lands currently provide some recreational value. There may be temporary congestion of traffic corridors in the vicinity of the activity during the construction phase. The conditions would return to normal after the construction activity is completed. Additionally, noise from construction activities could impact recreation use within the JLNHPP. No changes in impacts would be anticipated for the Ames and Mt. Kennedy reach.

Cumulative Impacts

Construction of the proposed action for these particular reaches would not have any significant cumulative effect on recreation. The construction of the WBV-14.c.2 would result in a loss of cypress tupelo swamp habitat type that could be used for recreation. The proposed action would not result in significant cumulative impacts to recreation but would contribute to the cumulative loss of this habitat type for recreation.

3.3 SOCIOECONOMIC RESOURCES

The proposed project being evaluated is a part of the WBV located in Jefferson Parish and the larger New Orleans MSA. The boundaries of IER #14 generally follow the initial alignment of the existing levee, extending southward from the community of Westwego, following nearby drainage canals and alluvial ridges along Bayou des Familles, and then turning southeast to the V-line levee. The eastern boundary of the levee alignment includes urban developments while most of the area west of the alignment is wetlands and part of the JLNHPP. The project includes almost 11 miles of levee, and the construction of 10,762 linear ft of floodwalls, including fronting protection at three existing pumping stations. The social and economic considerations discussed in IER #14 are essentially those immediately within the proposed project site and ROW and are incorporated by reference.

3.3.1 Transportation

Future Conditions with No Action

Under the No Action alternative the Government's approved action as discussed in IER #14 would be constructed. Consequently, direct transportation impacts would not differ from those described previously in the original IER. However, indirect and cumulative impacts would differ from those impacts described in IER #14. Indirect impacts not previously discussed in IER #14 would include moderate but temporary traffic congestion along the major road ways such as Laplace Boulevard, Hwy 45 and Hwy 3134 due to project construction activities.

Based on additional transportation information obtained since the release of IER #14, cumulative transportation impacts are estimated to be significant. Current estimates of over 57 million miles traveled and over 2 million trips for the predicted truck transportation of the required borrow material for both the Westbank and Vicinity and Lake Pontchartrain and Vicinity Hurricane Protection Projects. It is estimated that daily trips for borrow would exceed 40 continuous weeks of 3,000 daily deliveries. The incremental cumulative effect from the construction of IER #14 would not be substantial, but the cumulative effect of transporting all the materials needed to construct the Westbank and Vicinity and Lake Pontchartrain and Vicinity Projects may be significant. Additionally impacts to transportation infrastructure that are anticipated include the accelerated wear of transportation infrastructure including roads, bridges and culverts. Additional cumulative transportation impacts associated with constructing the HSDRRS will be discussed in the CED.

Future Conditions for Proposed Action all reaches

Direct, Indirect and Cumulative Impacts

The impacts of the proposed action for all reaches addressed in this IER Supplemental would be similar to those described in "Future Condition with No Action" section. Direct, indirect and cumulative impacts may be slightly increased from the no action condition because the duration of construction of the proposed WBV-14.c.2 levee enlargement would be longer than the action approved in IER #14 for the WBV-14.c.2 reach.

3.3.2 Environmental Justice

Future Conditions with No Action

Under the no action alternative, the proposed action would only be constructed as described in IER #14. Consequently, environmental justice impacts would not differ significantly from those described previously in IER #14.

Future Condition with Proposed Action all reaches

Under the proposed action, the WBV-14.c.2 levee would be enlarged and flood side shifts would occur at the Ames and Mt. Kennedy Pumping Stations. The proposed construction would occur in uninhabited areas which are located within 1-mile of residential communities. With implementation of the proposed action, minor impacts from the proposed action, such as air quality, noise, traffic, safety, etc. would occur, but are usually limited to within 1-mile of the project area, are temporary in nature, and would impact non-minority and/or non-low income communities as well. Additional impacts would be the additive combination of impacts to minority and/or low-income communities by other Federal, state, local, and private efforts.

3.4 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

Existing Conditions

Under Engineer Regulation (ER) 1165-2-132 the reasonable identification and evaluation of Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within a proposed area of construction is required. ER 1165-2-132 identifies our HTRW policy to avoid the use of project funds for HTRW removal and remediation activities. Costs for necessary special handling or remediation of wastes (e.g., Resource Conservation and Recovery Act (RCRA) regulated), pollutants and other contaminants, which are not regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), would be treated as project costs if the requirement is the result of a validly promulgated Federal, state or local regulation.

An ASTM E 1527-05 Phase I Environmental Site Assessment (ESA) was completed for the original project area on 27 March 2008. A copy of the Phase I ESA will be maintained on file at CEMVN. The Phase I ESA documented the Recognized Environmental Conditions (REC) for the original project area. Since the Phase I study was completed additional changes in project design have occurred which have enlarged the proposed project footprint. In the WBV-14.c.2 reach the proposed ROW was expanded by 100 ft and in the Ames and Mt. Kennedy reach the floodwall alignment would be shifted within the ROW.

Reports of possible dumping were received in the area of the proposed widened WBV-14.c.2 reach following a field site inspection. To address these reports, an environmental site assessment addendum and HTRW field inspection were conducted. The addendum review identified an abandoned well within the footprint of the existing levee ROW. The field inspection, conducted on 21 July 2009, did not reveal any evidence of HTRW either at the location identified for the abandoned well or in the possible dump site. Should any trash be discovered during construction activities an appropriate response plan would be developed.

If a Recognized Environmental Condition (REC) cannot be avoided, due to the necessity of construction requirements, the CEMVN may further investigate the REC to confirm presence or absence of contaminants, actions to avoid possible contaminants, such as removing contaminated soils, and if local, state or Federal coordination is required. Because the CEMVN plans to avoid RECs, and plans to work mainly within the previously established ROW, the probability of encountering HTRW in the project area is very low.

Future Condition with No Action

Under the no action alternative, construction of the previously approved plan would be implemented. Consequently, direct, indirect, and cumulative impacts of HTRW would not differ from those described previously in IER #14.

Proposed Action for all Reaches

Direct, Indirect and Cumulative Impacts

Under the proposed action, the proposed modifications would be implemented and the

100-year level of risk reduction would be constructed. Because no specific HTRW concerns that could not be avoided or removed were identified from previous site investigations, no direct, indirect, or cumulative effects from HTRW would result from implementing the proposed plan. However, the potential to create HTRW materials during the construction process is always a possibility. Storage, fueling, and lubrication of equipment and motor vehicles associated with the construction process would be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants, and oil would be managed and stored in accordance with all Federal, state, and local laws and regulations. Used lubricants and used oil would be stored in marked corrosion-resistant containers and recycled or disposed in accordance with appropriate requirements. The construction contractor would be required to develop a Spill Control Plan.

In the event of an unplanned discovery of HTRW materials during construction, work that could affect the contaminated materials would be stopped and appropriate notification and coordination would be completed. Investigations would be conducted to characterize the nature and extent of the contamination and establish appropriate resolution.

4.0 CUMULATIVE IMPACTS

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

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

Constructing the redesigned WBV-14.c.2 levee and Ames and Mt. Kennedy reaches is necessary to meet the more rigorous design guidelines for the HSDRRS that were adopted after IER #14 was completed. If the proposed changes in design are not implemented the 100-year level of risk reduction will not be achieved for these reaches. Providing the 100-year level of risk reduction would contribute to the protection of life and property and the reduction of physical and environmental damage along the West Bank and Vicinity, Westwego to Harvey Levee Project area.

Negative affects associated with the implementation of the proposed action that could contribute cumulatively with the effects of other projects include construction related increases in truck traffic, noise and vibration, vehicle and equipment emissions as well as the accelerated wear of transportation infrastructure including roads, bridges and culverts. Other impacts include the permanent loss of approximately 42 areas of cypress-tupelo swamp and the filling of 1.1 acres of canal bottom. Until final designs are completed on all reaches of the LPV and WBV projects, the total habitat loss related to the implementation of all the IERs cannot be finalized. The current totals are presented in table 6. The positive cumulative effects of implementing the proposed action would be the temporary expansion of the local economy by construction-related activities.

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

Table 6 shows the cumulative compensatory mitigation that will be completed by the CEMVN. This table will be updated as potential impacts are assessed in forthcoming IERs.

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

West Bank and Vicinity,
Westwego to Harvey Levee, Jefferson Parish, Louisiana

Table 6. HSDDRRS Impacts and Compensatory Mitigation to be Completed

IER	Parish		Non-wet	Non-wet BLH	BLH	BLH	Swamp	Swamp	Marsh	Marsh	Water Bottoms
			acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs	acres
1 LPV, La Branch Wetlands Levee	St. Charles	Protected Side	-	-	-	-	73.23	39.53	-	-	-
		Flood Side	-	-	-	-	38.48	29.73	-	-	
1 Supplemental LPV, La Branch Wetlands Levee	St. Charles	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	
2 LPV, West Return Floodwall	St. Charles, Jefferson	Protected Side	-	-	-	-	-	-	17.00	9.00	-
		Flood Side	-	-	-	-	-	-	17.00	9.00	
3 LPV, Jefferson Lakefront Levee	Jefferson	Protected Side	-	-	-	-	-	-	-	-	26.40
		Flood Side	-	-	-	-	-	-	-	-	
4 LPV, Orleans Lakefront Levee	Orleans	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	
5 LPV, Lakefront Pumping Stations	Jefferson, Orleans	Protected Side	-	-	-	-	-	-	-	-	3.29
		Flood Side	-	-	-	-	-	-	-	-	
6 LPV, Citrus Lands Levee	Orleans	Protected Side	-	-	-	-	-	-	-	-	6.90
		Flood Side	-	-	-	-	-	-	4.00	-	
7 LPV, Lakefront Levee	Orleans	Protected Side	-	-	151.70	79.30	-	-	100.40	36.80	106.00
		Flood Side	-	-	30.00	11.90	-	-	70.00	37.20	
8 LPV, Bayou Dupre Control Structure	St. Bernard	Protected Side	-	-	-	-	-	-	-	-	0.30
		Flood Side	-	-	-	-	-	-	-	-	
10 LPV, Chalmette Loop	St. Bernard	Protected Side	-	-	38.32	16.44	-	-	106.55	57.31	95.00
		Flood Side	-	-	35.31	15.22	-	-	323.04	209.94	
11 Tier 2 Borgne IHNC	Orleans, St. Bernard	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	15.00	2.59	-	-	122.00	24.33	
12 GIWW, Harvey, Algiers	Jefferson, Orleans, Plaquemines	Protected Side	-	-	251.70	177.3	-	-	-	-	-
		Flood Side	-	-	2.30	1.90	74.90	38.50	-	-	
14 WBV, Westwego to Harvey Levee	Jefferson	Protected Side	-	-	45.00	30.00	-	-	-	-	-
		Flood Side	-	-	45.50	37.17	29.75	17.02	-	-	

West Bank and Vicinity,
Westwego to Harvey Levee, Jefferson Parish, Louisiana

IER	Parish		Non-wet	Non-wet BLH	BLH	BLH	Swamp	Swamp	Marsh	Marsh	Water Bottoms
			acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs	acres
14.a Supplemental WBV, Westwego to Harvey Levee	Jefferson	Protected Side	-	-			-	-	-	-	-
		Flood Side				42	24				
15 WBV, Lake Cataouatche Levee	Jefferson	Protected Side	-	-	23.50	6.13	-	-	-	-	-
		Flood Side	-	-	3.60	1.35	-	-	-	-	-
16 WBV, Western Tie- in	Jefferson, St. Charles	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	137.80	66.30	-
17 Company Canal Floodwall	Jefferson	Protected Side	-	-	5.50	2.69	-	-	-	-	-
		Flood Side	-	-	-	-	19.00	17.09	-	-	-
18 GFBM	Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles	Protected Side	379.30	152.32	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
19 CFBM	Hancock County, MS; Iberville, Jefferson, Orleans, Plaquemines, St. Bernard	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
22 GFBM	Jefferson, Plaquemines	Protected Side	244.69	118.54	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
23 CFBM	Hancock County, MS; Plaquemines, St. Bernard, St. Charles	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
25 GFBM	Jefferson, Orleans, Plaquemines	Protected Side	933.00	284.00	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
26 CFBM	Jefferson, Plaquemines, St. John the Baptist; Hancock County, MS	Protected Side	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
28 GFBM	Jefferson, Plaquemines, St. Bernard	Protected Side	19.94	8.45	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
29 CFBM	Orleans, St. Tammany, St. John the Baptist	Protected Side	107.30	48.60	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-
30 CFBM	St. Bernard and St. James; Hancock, MS	Protected Side	225.00	189.40	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-

*West Bank and Vicinity,
Westwego to Harvey Levee, Jefferson Parish, Louisiana*

IER	Parish		Non-wet	Non-wet BLH	BLH	BLH	Swamp	Swamp	Marsh	Marsh	Water Bottoms
			<i>acres</i>	<i>AAHUs</i>	<i>acres</i>	<i>AAHUs</i>	<i>acres</i>	<i>AAHUs</i>	<i>acres</i>	<i>AAHUs</i>	<i>acres</i>
Totals		Protected Side	1909.23	801.31	515.72	311.89	73.23	39.53	223.95	103.11	00.00
		Flood Side	-	-	131.71	70.13	204.13	126.34	673.84	346.77	230.99
		Both	1909.23	801.31	647.43	382.02	277.36	165.87	897.79	449.88	230.99

- Not applicable to the IER or number impacted is 0

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

5.0 SELECTION RATIONALE

The modifications proposed in this IER Supplemental were developed in order to meet the 100-year level of risk reduction for the project features identified. The proposed design modifications discussed in this IER Supplemental are necessary to meet the more rigorous design guidelines for the HSDRRS that were adopted after IER #14 was completed.

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 alternative has generally been interpreted to be 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.

If the proposed changes in design are not implemented, the 100-year level of risk reduction will not be achieved for either the WBV-14.c.2 levee reach or the WBV-37 and WBV-43 reaches adjacent to the Ames and Mt. Kennedy Pumping Stations. On the basis of risk reduction and reliability, environmental impacts, cost, time and constructability, the proposed action for the WBV-14.c.2 levee reach was selected as the least damaging practicable alternative to provide the 100 year level of risk reduction. The existing WBV-14.c.2 alignment has been incorporated into the widened levee, thereby, reducing construction impacts. The proposed action for the Ames and Mt. Kennedy Pumping Stations is a redesign to meet the more rigorous design guidelines; as a result, alternatives were not formally developed or evaluated. During the redesign process, however, designs that impacted the adjacent JLNHPP lands were eliminated from consideration. None of the proposed actions preclude any future enhancements to the HSDRRS

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

6.0 COORDINATION AND CONSULTATION

6.1 PUBLIC COORDINATION

Since this project includes unavoidable adverse impacts to jurisdictional wetlands under Section 404 of the Clean Water Act, a 404 public notice will be made available to the public and other interested parties on the www.nolaenvironmental.gov website. The 404 public notice will be advertised for the 30-day period.

The draft IER Supplemental will be distributed to the public for a 30-day comment period. A public meeting discussing the draft IER will be held if requested by a stakeholder during the 30-day comment period. Any comments received during the comment period would be considered as part of the official record. After the 30-day comment period and the public meeting, if held, the CEMVN Commander would review

all comments received and would make a determination of whether the comments are substantive in nature. If the comments are not considered to be substantive, the Commander will make a decision on the proposed action. This decision would be documented in the form of an IER Decision Record. If comments are determined to be substantive in nature, an addendum would be prepared and published for a 30-day public comment period. After the expiration of the public comment period, the CEMVN Commander will make a decision on the proposed action. The decision would be documented in the form of an IER Decision Record.

6.2 AGENCY COORDINATION

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

- 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, NOAA National Marine Fisheries Service
- U.S. Natural Resources Conservation Service
- Louisiana 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

The USFWS has reviewed the proposed action and in their e-mail dated 2 September 2009, concurred with the USACE determination that the proposed action would have no effect on any known threatened or endangered species or their habitat. National Oceanic and Atmospheric Administration (NOAA) NMFS concurred with the CEMVN determination that the proposed action would have no impact to essential fish habitat in by their e-mail dated 9 July 2009. The USACE made a no effect determination for federally protected species under the jurisdiction of NOAA NMFS.

The LaDNR reviewed the proposed action for consistency with the Louisiana Coastal Resource Program (LCRP). The proposed action was found to be consistent with the LCRP, as per a letter dated 10 November 2009.

The Louisiana Department of Environmental Quality (LDEQ) reviewed the proposed action. CEMVN received Water Quality Certification by letter dated 4 August 2009. An Air Quality Certification is being coordinated with LDEQ through the 30-day public review period associated with IERS #14.a.

Section 106 of the National Historic Preservation Act, as amended, requires consultation with SHPO and Native American tribes. SHPO reviewed the proposed action and determined that it would not adversely affect any cultural resources by letter dated 18 August 2009. Eleven Federally-recognized tribes that have an interest in the region were given the opportunity to review and comment on the proposed action. Four tribes, the Quapaw Tribe of the Oklahoma, Seminole Tribe of Florida, Choctaw Nation of Oklahoma and the Alabama- Coushatta Tribe of Texas, replied that they have no objection to the proposed action.

The USFWS reviewed the proposed action in accordance with the Fish and Wildlife Coordination Act and prepared a draft Coordination Act Report for IERS #14.a dated 10 November 2009. The USFWS previously provided programmatic recommendations, in the “Draft Fish and Wildlife Coordination Act Report for the Individual Environmental Reports (IER), Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4)” in November 2007. The uncertainties in the design of several projects prohibited a complete evaluation of the impacts to fish and wildlife species and the reporting responsibilities under Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et seq.). Therefore, a subsequent final supplemental report would 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 website. Those programmatic recommendations and the recommendations for IERS #14.a are incorporated by reference.

The USFWS’ recommendations specific to the IERS #14.a and CEMVN’s response to them are listed below:

Recommendation 1: To the greatest extent possible, situate flood protection features so that destruction of wetlands and non-wetland bottomland hardwoods are avoided or minimized.

CEMVN Response 1: Concur.

Recommendation 2: Ensure impacts and encroachment onto National Park Service lands are avoided. Unavoidable impacts and encroachments, when permissible by that agency, should be minimized and appropriately mitigated. Point of contact for the National Park Service (NPS) is Chief of Resource Management David Muth (504)589-3882 extension 128, (david_muth@nps.gov)

CEMVN Response 2: Concur.

Recommendation 3: Future maintenance and associated activities (e.g., staging areas, access routes, pipeline lowerings, etc.) should be identified, planned and coordinated with the JLNHPP staff to avoid future potential impacts to National Park Service lands.

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: Concur.

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

CEMVN Response 5: USACE 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 area 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 in accordance with the OMRR&R manual that the USACE provides upon completion of the project construction.

Recommendation 6: Further detailed planning of project features (e.g., Design Documentation Report, Engineer Documentation Report, Plans and Specifications, or other similar documents) should be coordinated with the Service, NMFS, LDWF, Environmental Protection Agency (EPA) and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on all the work addressed in these reports.

CEMVN Response 6: Concur.

Recommendation 7: If a proposed project feature is changed significantly or is not implemented within one year of the date of our Endangered Species Act consultation letter, we recommend that the Corps reinitiate coordination with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.

CEMVN Response 7: Concur.

Recommendation 8: The Corps shall fully mitigate for any unavoidable losses of wetlands (108.19 AAHUs) caused by the project features. Development and implementation of those mitigation plans should be done in concert with the Service and other resources agencies. To the extent feasible, impacts to Federal lands should be mitigated on Federal lands within the vicinity of IER 14.

CEMVN Response 8: Mitigation for the impacts caused by this project would be coordinated through mitigation IER(s).

7.0 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.

For the proposed action, a total of 42 acres has been identified that would require compensatory mitigation. Approximately 42 acres of cypress-tupelo swamp comprise the total number of acres. Quantitative analysis utilizing existing methodologies for water resource planning has identified the acreages and habitat type for the direct or indirect impacts of implementing the proposed action.

On 30 August 2007, an interagency field trip was conducted to obtain raw field data for the IER #14 project. 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. That information and information gathered during an additional site inspection conducted on 28 August 2009, by the USFWS was utilized to compute habitat impacts due to the proposed IERS #14.a. Approximately 24 AAHUs of cypress-tupelo swamp have been computed as appropriate mitigation requirements for IERS #14.a.

Two distinct habitats were represented within the boundaries of IER #14 project, namely bottomland hardwood forests and cypress-tupelo swamp. The habitat type impacted by the proposed actions described in the IER Supplemental is cypress-tupelo swamp of medium to high value which is located within reach WBV-14c.2 and canal bottom and canal shoreline which are located adjacent to the pumping stations. After IER #14 was completed the USACE adopted more rigorous design guidelines for the HSDRRS. As a result, the levee in reach 14c.2 and fronting protection and floodwall construction at the Ames and Mt. Kennedy Pumping Stations had to be redesigned in order to achieve the 100-year level of risk reduction. In the case of the WBV-14.c.2 reach, the redesigned levee footprint requires the expansion of the levee footprint outside of existing ROW. The area impacted by this flood side shift is cypress-tupelo swamp that is located in the CIT tract. The passage of the Omnibus Public Lands Management Act in April 2009 authorized the transfer of these lands from the USACE to the National Park Service (Times Picayune 2009). As stated previously, the proposed levee expansion project requires a footprint that meets new more rigorous design guidelines and provides engineering effectiveness and safety.

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

This forthcoming mitigation IER will implement compensatory mitigation as early as possible. All mitigation activities will be consistent with standards and policies established in appropriate Federal and state laws, and USACE policies and regulations.

Table 6. shows the cumulative compensatory mitigation that will be completed by the CEMVN. This table will be updated as potential impacts are assessed in forthcoming IERs.

8.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

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

Environmental compliance for the proposed action would be achieved upon coordination of this IER Supplemental with appropriate agencies, organizations, and individuals for their review and comments; USFWS and NMFS confirmation that the proposed action would not adversely affect any T&E 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 SHPO; receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations; receipt and acceptance or resolution of all LDEQ comments on the air quality impact analysis documented in the IER; and receipt and acceptance or resolution of all Essential Fish Habitat recommendations.

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 leveed and forced drainage was initiated in the middle 1960s.

Executive Order 11990. E.O. 11990, Protection of Wetlands, has been important in project planning. It is acknowledged that a portion of the area enclosed by the existing levee consists of wetlands. However, by following the existing alignments and where enlargements are occurring incorporating the existing levee ROW into the final levee enlargement would minimize direct adverse impacts to wetlands for this project. Any increased size of the interior borrow/drainage canal as a result of levee enlargement would result in increased capacity; however, this would have essentially no indirect effect on the rate of drainage from the basin. Increased pumping station capacities are not a part of this action.

Consistency with Coastal Zone Management (CZM) Program. The CEMVN has determined that construction and maintenance of the proposed modifications to the 100-year level of protection along the WBV, Westwego to Harvey Levee Project is consistent, to the maximum extent practicable, with the guidelines of the State of Louisiana's approved Coastal Zone Management Program. A modification to CZM consistency determination C20080048, was dated 30 June 2009. The consistency determination concurrence was received from the LaDNR on 10 November 2009.

Clean Air Act. The original 1970 CAA authorized USEPA to establish NAAQS to limit levels of pollutants in the air. The USEPA has promulgated NAAQS for six criterion pollutants: sulfur dioxide (SO₂), nitrogen dioxide (NO₂), 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, would become part of the NAA. The project is located in Jefferson 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, 1972, 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 would 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 following actions would be taken to minimize the potential for adverse environmental impacts. The proposed levee enlargement would incorporate the existing levee ROW into the levee alignment. All sloped areas would be seeded. Non-forested wetlands, consisting of mown levee grasses or grazed pasture, were not mitigated because of their low value to fish and wildlife resources. The proposed project complies with the requirements of the guidelines. The LDEQ Water Quality Certification letter, JP 080213-04, dated 4 August 2009, completes the certification process.

Endangered Species Act. The Endangered Species Act (ESA; 16 U.S.C. 1531-1543; Pub. L. 93-205, as amended) was enacted in 1973 for the purpose of providing for the conservation of species which are in danger of extinction throughout all or a significant portion of their range. "Species" is defined by the ESA 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 our determination in their e-mail dated 2 September 2009.

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, as well as the measures that are needed to 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 conducting construction projects on the potential harm to living marine resources caused by the proposed water development projects, and submits 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. 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 for the IER Supplemental was received from USFWS by letter dated 10 November 2009. A final report would be

prepared after the 30-day public review period and all comments regarding USFWS trust resources have been resolved, and before a final IER Supplemental has been completed.

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 take 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 take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offer 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 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. 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 National Environmental Policy Act (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 their decision-making process. The preparation of this IER Supplemental is a part of complying 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 18 August 2009 concludes this process.

9.0 CONCLUSIONS

9.1 INTERIM DECISION

The proposed action would require the enlargement of approximately 3.27 miles of existing levee from Westwego to Harvey as part of the HSDRRS on the west bank of the Mississippi River to a 100-year level of risk reduction. The CEMVN has assessed various alternatives to achieve this goal and has determined the following proposed actions for each reach:

- WBV-14.c.2 – a flood side shift and levee enlargement to achieve 100-year risk reduction that meets the more rigorous design guidelines adopted by the USACE for the HSDRRS after IER #14 was prepared. The levee enlargement requires a base width of 325 ft which includes the levee, stability berm and vegetative free zone. The centerline of the levee would have a 40 ft flood side shift from the previously cleared alignment and would require 100 ft width of new ROW along the flood side of the 3.29 mile levee for the length of the reach.
- WBV-37 and WBV- 43 – Ames and Mount Kennedy Pumping Stations and adjacent floodwalls redesign with a minor flood side shift to achieve 100-year risk reduction that meets the more rigorous design guidelines adopted by the USACE for the HSDRRS after IER #14 was prepared. The majority of the work would take place within existing ROW, with temporary and permanent additional ROW required flood side to construct temporary retention structures and permanent discharge structures, and Millaudon Canal bottom and bankline armoring.

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 localized impacts would occur to wildlife and nearby residents from noise and decreased air quality from heavy equipment and trucks used during construction.
- Short- and long-term localized impacts would occur to fisheries and aquatic organisms located within the project construction area.
- Permanent displacement of fish and temporary displacement of wading birds, waterfowl, or other wildlife presently located within approximately 42 acres of cypress-tupelo swamp would occur.
- Permanent adverse impacts to 42 acres of cypress-tupelo swamp would occur.

9.2 PREPARED BY

The point of contact and responsible manager for the preparation of this IER is Beth Nord, 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 7 lists the preparers of the various sections and topics in this IER.

Table 7. IERS #14.a Preparation Team

Environmental Team Leader	Gib Owen, CEMVN
Environmental Manager	Beth Nord , CEMVN
Senior Project Manager	Julie Vignes, CEMVN
Senior Project Manager	Gary Brouse, CEMVN
Project Manager	Jeff Williams, CEMVN
Review Team	Rita Trotter, CEMVN - Office of Counsel
HTRW	J. Christopher Brown, CEMVN
Cultural Resources	Michael Swanda, CEMVN
Recreational Resources	Andrew Perez, CEMVN
Environmental Justice	Jerica Richardson, CEMVN
Economics	Allen Hebert, CEMVN
Technical Editor	Jennifer Darville, CEMVN
Internal Technical Review	Thomas Keevin, CEMVS

9.3 LITERATURE CITED

National Park Service, 8 June 2004, Testimony to adjust the boundary of the Barataria Preserve Unit of Jean Lafitte National Historical Park and Preserve.
<http://www.nps.gov/legal/testimony/108th/jlafitte.pdf>

Times Picayune Article, 3 April 2009, Jean Lafitte Park gets room to grow, extends protection.
http://www.nola.com/news/index.ssf/2009/04/jean_lafitte_park_gets_room_to.html

Wells, Douglas C., Coastal Environments, Inc., 2007. Management Summary: Cultural Resources Assessment of the Harvey-Westwego Segment (IER # 14), West Bank and Vicinity Hurricane Protection Levee, Jefferson Parish, Louisiana. Submitted to U.S. Army Corps of Engineers, New Orleans District.

Wells, Douglas C., Coastal Environments, Inc., 2009. Management Summary: Reconnaissance Survey of the Redesigned e Harvey-Westwego Segment (IER # 14), West Bank and Vicinity Hurricane Protection Levee, Jefferson Parish, Louisiana. Submitted to U.S. Army Corps of Engineers, New Orleans District

Woodward, M., U.S. Army Corps of Engineers, 2007. Three Deep Mixing Application for Task Force Guardian.

APPENDICES

Appendix A

List of Acronyms and Definitions of Common Terms

Acronym	Definition
AAHU	Average Annualized Habitat Units
CAA	Clean Air Act
CAR	Coordination Act Report
CED	Comprehensive Environmental Document
CEMVN	Corps of Engineers, Mississippi Valley Division, New Orleans District
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIT	Commercial Investment Trust
CMSA	Consolidated Metropolitan Statistical Area
CWA	Clean Water Act
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
CZM	Coastal Zone Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
EL.	Elevation
E.O.	Executive Order
ER	Engineering Regulation
ESA	Endangered Species Act
ESA	Environmental Site Assessment
ESRI	Environmental Systems Research Institute
FONSI	Finding of No Significant Impacts
FT	Feet
GIWW	Gulf Intracoastal Waterway
HSDDRS	Hurricane and Storm Damage Risk Reduction System
HEP	Habitat Evaluation Procedure
HPS	Hurricane Protection System
HTRW	Hazardous, Toxic, and Radioactive Waste
HWY	Highway
IER	Individual Environmental Report
IPCC	Intergovernmental Panel on Climate Change
JLNHPP	Jean Lafitte National Historical Park and Preserve-Barataria Preserve Unit
LACPR	Louisiana Coastal Protection and Restoration
LCRP	Louisiana Coastal Resource Program
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LPV	Lake Pontchartrain and Vicinity
MBTA	Migratory Bird Treaty Act

MPH	Miles Per Hour
MSA	Metropolitan Statistical Area
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NAVD 88	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NWR	National Wildlife Refuge
OCS	Outer Continental Shelf
O&M	Operations and Maintenance
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
OSE	Other Social Effects
PA	Programmatic Agreement
P&G	Principles and Guidelines
PI	Plasticity Index
P.L.	Public Law
PPA	Project Partnering Agreements
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RED	Regional Economic Development
ROD	Record of Decision
ROW	Right-of-Way
SHPO	Louisiana State Historic Preservation Officer
SPH	Standard Project Hurricane
T&E	Threatened and Endangered Species
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VE	Value Engineering
WBV	West Bank and Vicinity
WRDA	Water Resources Development Act
WVA	Wetland Value Assessment

Appendix B

Interagency Correspondence

Nord, Beth P MVN

From: Richard Hartman [Richard.Hartman@noaa.gov]
Sent: Thursday, July 09, 2009 8:29 AM
To: Nord, Beth P MVN
Subject: Re: Follow up version of Magnuson -Stevens Coordination letter

Beth - NMFS concurs with the Corps of Engineers determination that the proposed actions to be taken to implement IER 14 would have no impact to essential fish habitat. Because there is no adverse impact, there is no requirement to coordinate with NMFS under provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

Richard Hartman

Nord, Beth P MVN wrote:

>
> <<document2009-07-08-145705.pdf>>
> Richard
> Thanks for the call this morning. Revised letter but did not send
> second set of the enclosure.
>
> Beth
>

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE
SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM
HC-61, BOX 21A
CLEWISTON, FL 33440
PHONE: (863) 983-6549
FAX: (863) 902-1117



TRIBAL OFFICERS
CHAIRMAN
MITCHELL CYPRESS
VICE CHAIRMAN
RICHARD BOWERS JR.
SECRETARY
PRISCILLA D. SAYEN
TREASURER
MICHAEL D. TIGER

Michael Swanda
Department of the Army
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

THPO#: 003940

Wednesday, July 29, 2009

Subject: Assessment of Effects for IER #14 (Harvey-Westwego Segment), West Bank and Vicinity Hurricane Protection Levee, Jefferson Parish, LA

Dear Mr. Swanda,

The Tribal Historic Preservation Office of the Seminole Tribe of Florida (STOF-THPO) has received your correspondence concerning the aforementioned project. The STOF-THPO concurs with your findings of "no historic properties affected" within the APE for this project. However, the STOF-THPO would like to be informed should any archaeological and/or historic resources be discovered during the construction process.

We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference **THPO-003940** for any related issues.

We look forward to working with you in the future.

Sincerely,



FOR

Direct routine inquiries to:

Willard Steele,
Tribal Historic Preservation Officer

Dawn Hutchins,
Compliance Review Supervisor

ETY:dh



Choctaw Nation of Oklahoma

P.O. Box 1210 • Durant, OK 74702-1210 • (580) 924-8280

Gregory E. Pyle
Chief

Gary Batton
Assistant Chief

July 30, 2009

Joan Exnicios
Dept of the Army
New Orleans District, Corp of Engineers
PO Box 60267
New Orleans, Louisiana 70160-0267

Dear Joan Exnicios:

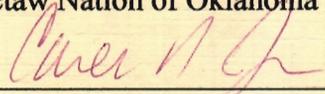
We have reviewed the following proposed project (s) as to its effect regarding religious and/or cultural significance to historic properties that may be affected by an undertaking of the projects area of potential effect.

Project Description: Westwego, Individual Environmental Report #14, Jefferson Parish

Comments: After review of the above-mentioned project(s), to the best of our knowledge, it will have no adverse effect on any historic properties in the project's area of potential effect. However, should construction activities exposed human remains, buried archaeological materials such as chipped stone, tools, pottery, bone, glass or metal items, or should it uncover evidence of buried historic building materials such as rock foundations, brick, or hand-poured concrete, this office should be contacted immediately at 1-800-522-6170 ext. 2137.

Sincerely,

Terry D. Cole
Tribal Historic Preservation Officer
Choctaw Nation of Oklahoma

By: 
Caren A. Johnson
Administrative Assistant

CAJ: vr

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL SERVICES

AUG 04 2009

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

Attention: Beth Nord

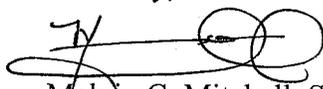
RE: Water Quality Certification (WQC 080213-04/AI 156035/CER 20090001)
Corps of Engineers Individual Environmental Report (IER#14) Supplemental
Jefferson Parish

Dear Ms. Nord:

The Department has reviewed your revised application for a Corps of Engineers permit for the construction of the Westwego to Harvey Levee in Jefferson Parish. This revision concerns the shift and widening of levee reach WBV-14.c.2, replacement of floodwalls at the Ames and Mount Kennedy Pump Stations and the relocation of pipelines in the WBV-14.f levee reach.

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

Sincerely,


Melvin C. Mitchell, Sr.
Administrator
Water Permits Division
MCM/jjp

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE
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TREASURER
MICHAEL D. TIGER

Michael Swanda
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
Environmental Planning and Compliance Branch
P.O. Box 60267
New Orleans, LA 70160-0267



THPO#: 004003

Thursday, August 06, 2009

Subject: Assessment of Effects for IER #14, West Bank and Vicinity, Harvey-Westego, Jefferson Parish, LA

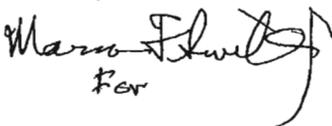
Dear Mr. Swanda,

The Tribal Historic Preservation Office of the Seminole Tribe of Florida (STOF-THPO) has received your correspondence concerning the aforementioned project. The STOF-THPO concurs with your findings of "no historic properties affected" within the APE for this project. However, the STOF-THPO would like to be informed should any archaeological and/or historic resources be discovered during the construction process.

We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference **THPO-004003** for any related issues.

We look forward to working with you in the future.

Sincerely,


Per

Direct routine inquiries to:

Willard Steele,
Tribal Historic Preservation Officer

Marion Smith,
Compliance Review Supervisor

JLP:ms



MITCHELL J. LANDRIEU
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

PAM BREUX
SECRETARY

August 13, 2009

Ms. Joan Exnicios
Chief, Environmental Planning and Compliance Branch
New Orleans District, Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Re: CRM Management Summary
Louisiana Division of Archaeology Report No. 22-3016-1
*Management Summary: Reconnaissance Survey of the
Redesigned Harvey-Westwego Segment (IER 14),
West Bank and Vicinity Hurricane Protection Levee,
Jefferson Parish, Louisiana*
Coastal Environments, Inc.

Dear Ms. Exnicios:

We are in receipt of your letter dated July 20, 2009, transmitting two copies of the above-cited report. We have completed our review and have the following comments to offer.

We concur with the findings presented in the draft report that it does not appear that any archaeological sites or other historic properties (i.e. standing structures) will be affected by the planned project for which the investigations were done.

Technical comments concerning several minor items are included with this letter, as are photocopied pages of the draft report with other comments/corrections noted. Please address these as appropriate in the preparation of the final report for this project and transmit two copies of the final report for our files. Should you have any questions concerning our comments, do not hesitate to contact Dennis Jones in the Division of Archaeology at (225) 342-8170 or by email at djones@crt.state.la.us.

Ms. Joan Exnicios
August 13, 2009
Page 2

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott Hutcheson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Scott Hutcheson
State Historic Preservation Officer

SH:DJ:s

C: Dr. Doug C. Wells, Coastal Environments, Inc. (w/enclosures)

TECHNICAL COMMENTS

1. Page 1. Please provide a citation for Figure 1 in the text to precede the figure itself.
2. Figure 1. Please designate on Figure 1 the limits of the “northern third” of right-of-way that is being changed for IER 14.
3. Page 3. A map showing the specific locations of the revised right-of-way in Figure 1 would be helpful, as well as the information that this revision consists of 6.5 ac. It is unclear from the figures presented in the report where the “V-levee segment between Highway 45 and the eastern terminus” that has not been developed is located. Please indicate this area (or Highway 45) in Figure 2.
4. Pages 13-14, Figure 5. Please show Lapalco Blvd., Section 87 west of Estelle and other locations mentioned in the text on page 13 in Figure 5.
5. Pages 15-18. The text and figures on these pages do a good job of presenting the conditions within the areas investigated.

where is "northern third"?

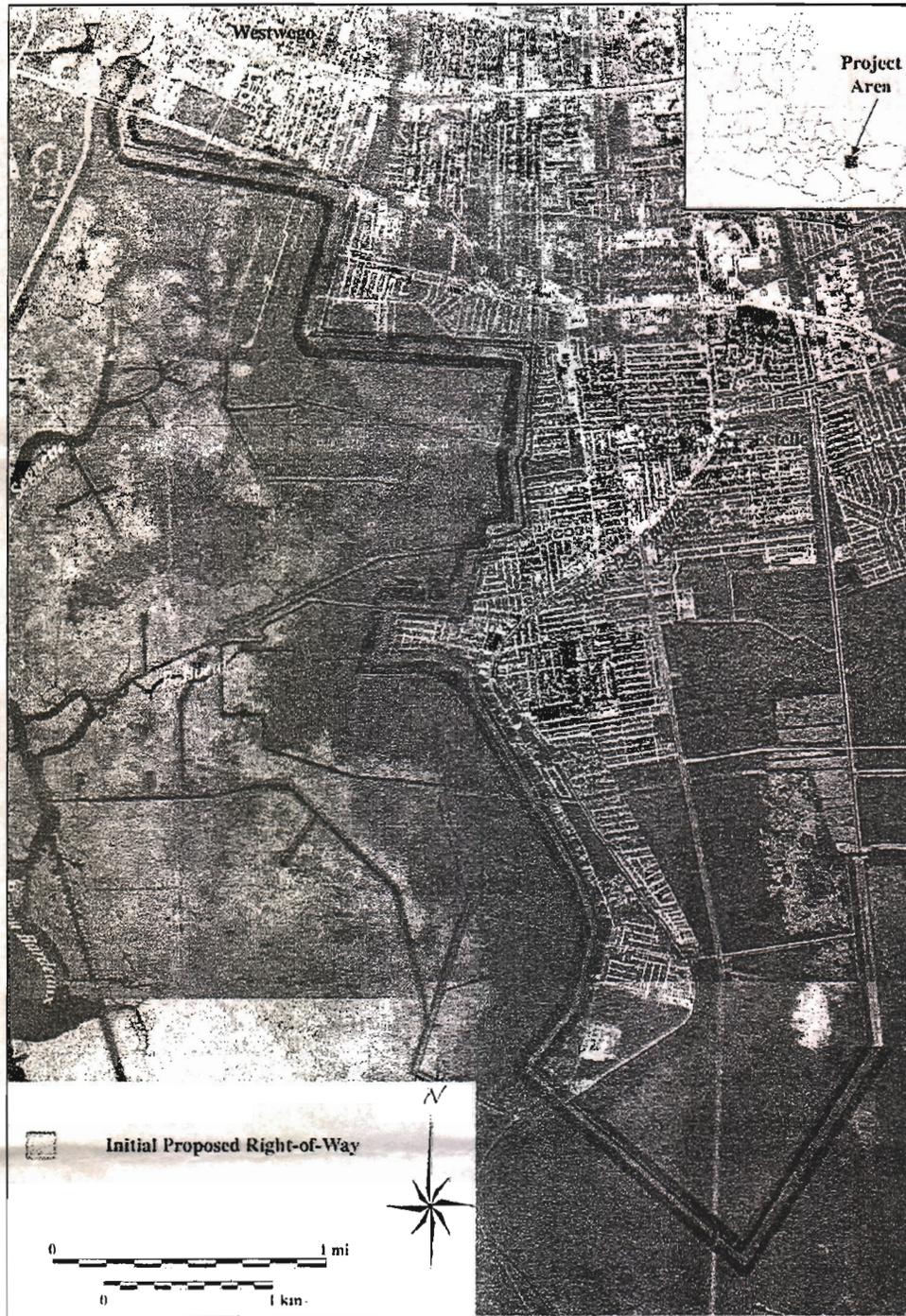


Figure 1. Aerial photograph showing the Harvey-Westwego Hurricane Protection Levee right-of-way.

the southeast) (Figure 1). This includes 12.9 mi (20.7 km) of levee, 7,013 linear feet (2,137.6 m) of floodwall construction, and fronting protection modifications for the Westminster, Ames, Mt. Kennedy, Old Westwego and New Westwego pumping stations. CEMVN is undertaking these improvements in order to protect the portions of the Greater New Orleans Area situated on the Mississippi River's right descending bank from storm surges associated with tropical weather events.

The initial scope of work for the Harvey-Westwego segment called for a 500 ft (152 m) right-of-way on the flood and protected sides of the levee. However, in June of 2007, the construction plans were changed to confine the proposed construction work to the current levee right-of-way, restricting the Area of Potential Effects (APE) to the previously-impacted corridor (Wells 2007). Then, in June of 2009, CEI received notification that the proposed right-of-way had changed again, expanding into previously unsurveyed areas in the northern third of the Harvey-Westwego segment. This expansion called for a 200 ft right-of-way on the flood side of the levee.

Natural Setting

Located along the backslope of the Mississippi River's natural levee in Jefferson Parish, Louisiana, the project area lies within the Barataria Basin, a broad, low region dominated by wetlands. The project area was once characterized almost entirely by cypress swamps and marshes, but forced drainage and filling has drastically altered the environment of much of the protected side of the levee. The flood side of the levee is still largely marsh and swamp, although subsidence has created areas of open water in the marsh. Levees along the Mississippi have prevented fresh water and sediments from reaching the marsh, further accelerating its deterioration. Urban and industrial development of the natural levee of the Mississippi River and its distributaries proceeded rapidly in the latter half of the twentieth century in this region, and only the V-levee segment between Highway 45 and the eastern

and urban development. Few areas were identified for standing structure survey, and none were located within the current study area.

As noted above, the APE under the newest set of construction plans was limited to three stretches of high-probability area totaling 6.5 ac (2.6 ha) on the flood side of existing levee. Following the issuance of rights-of-entry in June of 2009, personnel from CEI began survey of these high-probability areas identified in the first stages of this project. Areas A and C were classic cypress-tupelo swamplands, showing every indication of being permanently flooded (Figure 6). Probing was conducted at 15-m intervals at the foot of the levee within these two locations to check for the presence of archaeological deposits (particularly shell middens) within 2.0 m of the current ground surface. No indications of buried deposits were noted in these locations.

Aerial photography of the central area (Area B) suggested higher ground at this location. Shovel testing at this location revealed that the dry land within the APE is covered in a thick layer of fill and modern (1960s to 1980s) trash. Shovel testing was conducted at 30 m intervals in two transects spaced 30 m apart. Auger testing was also attempted, but no location could be found that would allow an auger test beyond 90 cm below surface, due to the density of trash (Figures 7, 8). A typical shovel test revealed a 15 cm deep layer of dark grayish brown (10YR 4/2) clay near the surface, filled with plastic sheeting, nylon rope, and plastic bottles. A thin layer of sterile, yellowish brown (10YR 5/4) sand fill underlay this to a depth of 17 cm below surface. Finally a thick deposit of dark gray (10YR 4/1) clay fill mixed with dark grayish brown to brown (10YR 4/2 to 4/3) clays and silty clays descended to a depth of at least 88 cm below surface. Modern trash abounded in this layer, including plastic dish soap bottles, 2-liter soda bottles, 10 oz soda bottle glass fragments with paper and foam labels, plastic shoe soles, nylon rope, ceramic bathroom tile, aluminum cans, plastic milk jugs, and similar, modern household trash. The area appears to have been used as a dump during the 1970s and 1980s, possibly for the adjacent subdivision on the protected side of the levee.



ALABAMA-COUSHATTA TRIBE OF TEXAS

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

August 14, 2009

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

Dear Mr. Swanda:

On behalf of Chief Oscola Clayton Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your agency's efforts to consult us regarding expansion of the Area of Potential Effect for Individual Environmental Report #14 Harvey – Westwego for Jefferson Parish.

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

Upon review of the July 20, 2009 documents submitted to our Tribe, no known impacts to religious, cultural, or historical assets of the Alabama-Coushatta Tribe of Texas should occur in conjunction with this proposal based upon the absence of identified cultural resources during recent investigations. Therefore, we concur with your "no historic properties affected" recommendation and have no objections to the proceeding of this proposal.

However, in the event of inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including this office, notified without delay. Should you require additional assistance, please do not hesitate to contact us.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "B. Celestine".

Bryant J. Celestine
Historic Preservation Officer

2009-08-28 11:59

504-862-2088 >>

3372914149 P 3/5

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

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.

Debra A. Brubaker
Acting Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service

Date: *Sept 9 2009*

Mr. James F. Boggs
Field Supervisor
U.S. Fish and Wildlife Service
646 Cajundome Blvd - Suite 400
Lafayette, Louisiana 70506

SUBJECT: Review of IER 14 S Proje

Dear Mr. Boggs:

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL		# of pages 1
To <i>Beth Nord</i>	From <i>David Walther</i>	
Dept./Agency	Phone #	
Fax #	Fax #	

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

The U.S. Army Corps of Engineers New Orleans District (CEMVN) is conducting investigations and preparing Nation Environmental Policy Act (NEPA) compliance documentation for twenty-one proposed levee projects. This documentation will consist of revision to the design of project features previously described in Individual Environmental Report (IER) 14 (IER 14 Supplement). Coordination was initially conducted for IER 14 in October 2007. IER 14 was released for public review on 30 June 2008. The Decision Record for IER 14 was signed on August 26, 2008. The U.S. Fish and Wildlife Service (USFWS) in their letters dated November 26, 2007, May 20, July 31, and August 18, 2008, indicated that the proposed action would have no effect on any known threatened or endangered species or their critical habitat . Since IER 14 was prepared, more restrictive geotechnical design criteria have been established which has resulted in changes in the project design. The areas that will be addressed in the 14 S document include the following:

WBV-14.c Reach WBV-14c extends from its western end at the Westwego Pump Station # 2 to the abandoned Orleans Village Pump Station. The right of way has been expanded 40 ft to the flood side of the existing levee alignment. An area of approximately 42 acres would be newly impacted.

WBV-14.b Reach WBV-14.b extends from the abandoned Orleans Village Pump Station to Hwy 45 and includes the Ames Pump Station (WBV- 37) and the Mt. Kennedy Pump Station (WBV-43). Demolish and replace floodwalls, install bottom paving and bank stabilization material. Only a small along the Millaudon Canal bankline and canal bottom would be newly impacted.

WBV-14.f Reach WBV-14. f extends from Highway 45 to the V-line levee floodwall. Within this reach relocate two gas pipelines by horizontal directional drilling below the

BOBBY JINDAL
GOVERNOR



SCOTT A. ANGELLE
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

November 10, 2009

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

RE: **C20080048**, Coastal Zone Consistency Modification 1
U, S. Army Corps of Engineers, New Orleans District
IER 14: WBV, Westwego to Harvey Levee, modification to expand footprint of Reach
WBV14.c, and replace floodwall along Reach WBV14.b, **Jefferson Parish, Louisiana**

Dear Ms. Exnicios:

The above referenced project modification has been reviewed for consistency with the approved Louisiana Coastal Resources Program (LCRP) as required by Section 307 of the Coastal Zone Management Act of 1972, as amended. The modification, as proposed in the application, is consistent with the LCRP.

Please be advised that the pipeline lowering projects described in the Consistency Determination modification are being reviewed as independent projects; please refer to C20090424 (Chevron) and C20090425 (Enterprise) should you have any questions. Inquiries may be directed to Jeff Harris of the Consistency Section at (225) 342-7949 or 1-800-267-4019.

Sincerely,


Gregory J. DuCote
Administrator

GJD/jdh

cc: David Walther, USFWS
Richard Hartman, NMFS
Barbara Keeler, EPA
Dave Butler, LDWF
Jaime Phillippe, LDEQ
Frank Cole, CMD FI
Jason Smith, Jefferson Parish
David Muth, Jean Lafitte National Historical Park

Coastal Management Division • Post Office Box 44487 • Baton Rouge, Louisiana 70804-4487
(225) 342-7591 • Fax (225) 342-9439 • <http://www.dnr.state.la.us>

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506
November 10, 2009

Colonel Alvin B. Lee
District Engineer
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Lee

Please reference the purposed supplement to Individual Environmental Report (IER) 14 for the Westwego to Harvey Levee, Jefferson Parish Louisiana. The Corps has recently proposed modifications to that project. That project is in response to Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4). That law authorized the Corps of Engineers (Corps) to upgrade two existing hurricane protection projects (i.e., Westbank and Vicinity of New Orleans [WBV] and the Lake Pontchartrain and Vicinity) in the Greater New Orleans area in southeast Louisiana to provide protection against a 100-year hurricane event. This draft supplemental report contains an analysis of the impacts on fish and wildlife resources that would result from changes to the previously proposed plan, and provides recommendations to minimize and/or mitigate project impacts on those resources. Furthermore, this report corrects a previous impact analysis for a levee reach not being addressed in the supplement to IER 14.

The proposed project was authorized by Supplementals 4 and 5 which instructed the Corps to proceed with engineering, design, and modification (and construction where necessary) of the above mentioned hurricane protection projects. Procedurally, project construction has been authorized in the absence of the report of the Secretary of the Interior that is required by Section 2(b) of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). Therefore, to fulfill the coordination and reporting requirements of the FWCA, the Service will be providing post-authorization 2(b) reports for each IER.

This draft supplemental report incorporates and supplements our FWCA Reports that addressed impacts and mitigation features for the WBV of New Orleans (dated November 10, 1986, August 22, 1994, November 15, 1996, and June 20, 2005), the November 26, 2007, Draft Programmatic FWCA Report that addressed the hurricane protection improvements authorized in Supplemental 4, and our August 18, 2008 report that addressed impacts resulting from implementation of IER 14 and corrects our previous supplement having the same date as this report. This draft supplemental report does not constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA. A draft report has been provided to the Louisiana Department of



Wildlife and Fisheries and the National Marine Fisheries Service; their comments will be incorporated into this report.

The study area is located in the south-central portion of Jefferson Parish within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. Higher elevations occur on the natural levees of the Mississippi River and its distributaries. Developed lands are primarily associated with natural levees, but extensive wetlands have been leveed and drained to accommodate residential, commercial, and agricultural development. Levees have been installed for flood protection purposes, often with negative effects on adjacent wetlands. However, extensive wetlands and associated shallow open waters still dominate the landscape outside the flood control levees. Habitat types in the project area include forested wetlands (i.e., bottomland hardwoods and swamps), non-wet bottomland hardwoods, marsh, open water, and developed areas. Factors that will strongly influence future fish and wildlife resource conditions outside of the protection levees include freshwater input and loss of coastal wetlands. All habitat within and adjacent to the project area will likely experience losses due to development, subsidence, and erosion. As previously mentioned, the Service has provided FWCA Reports for the WBV project. Those reports contain a thorough discussion of the significant fish and wildlife resources (including those habitats) that occur within the study area. Additional information about the study area and a discussion of the significant fish and wildlife resources (including habitats) that occur within that study area are contained in our August 2008 report (available at: http://www.fws.gov/filedownloads/ftp_gis/R4/Louisiana_ES/Walther/IER%202/). That report contains information concerning project design and alternatives examined. For brevity, that discussion is incorporated by reference herein, but the following brief descriptions are provided to update and augment the previously mentioned information.

The Barataria Preserve unit of Jean Lafitte National Historical Park and Preserve (JLNHPP) is located on the west bank of the Mississippi River and managed by the National Park Service (NPS). The existing Federal levee that is proposed for further modification is located adjacent to the Commercial Investment Trust (CIT) Tract. The CIT Tract consists of swamp adjacent to Bayou Segnette that was owned by the Corps as the result of a 1994 lawsuit. The passage of the Omnibus Public Lands Management Act in April 2009 authorized the transfer of these lands from the Corps to the JLNHPP. Impacts to Federal lands should be mitigated on adjacent Federal lands within the vicinity of IER 14, if feasible. The NPS has no authority to enter into agreements with others to allow uses which adversely affect park lands. Therefore, NPS lands cannot be directly utilized or adversely impacted by any flood control project feature unless authorized explicitly by Congress. For additional information concerning NPS lands within the area please contact Chief of Resource Management David Muth (504) 589-3882 extension 128, (david_muth@nps.gov).

The proposed project involves upgrading the existing flood protection levees and floodwalls that provide protection to the towns of Harvey and Westwego and other adjacent communities. The western end of the project originates just south of the Lapalco Boulevard in Westwego and continues along the existing flood protection project to its eastern terminus approximately 2.9 miles northeast of the vertex of the V-levee. The project is designed to use existing rights-of-

way (ROW) and levees within previously disturbed areas, which will serve to minimize environmental impacts. Some proposed features, however, would require new construction ROWs and would impact fish and wildlife habitats. The design, construction, and maintenance would be similar to that previously designed and constructed for the existing levee along this alignment.

The existing Harvey to Westwego levee is divided into five reaches, however, only the plans for two reaches (i.e., WBV – 14b and 14c) are proposed for modification, therefore only those reaches will be addressed in this supplemental report. Reach WBV-14b extends from the Orleans Village Pump Station to State Highway 45. Reach WBV-14c extends 3.3 miles from the western terminus (i.e., Westwego Pump Station # 2) to the abandoned Orleans Village Pump Station. Current levee heights for this reach are approximately 14 feet North American Vertical Datum of 1988 (NAVD88).

The previous selected plan for Reach WBV-14c would have expanded the protected-side levee foot print to achieve 100-year protection. All work would take place within the existing ROW and the levee would be raised to 14 feet NAVD88. Geotextile fabric and/or deep soil mixing would be incorporated into the levee to improve stability, support, seepage cutoff, and seismic retrofit. Existing floodwalls at the pump station within this reach would be replaced with a flood wall (inverted T or L design) constructed up to 16 feet NAVD88 and fronting protection would be provided to operating pump station. Proposed modifications to reach 14b and 14c include the floodside expansion (i.e., elimination of protected side expansion) and various changes to flood protection at the pumping stations. Changes at those pumping stations would not result in any additional impacts to fish and wildlife resources. Floodside expansion was determined necessary because of the risk involved with construction techniques that would have been necessary to utilize protected side expansion (e.g., degrading levees to place geo-textile fabric).

For Reach WBV-14f, the proposed plan is not being modified; however, the previous impact analysis was conducted using a 100-year period-of-analysis. The correct period-of-analysis should have been 50 years (Table 1).

Project impacts would result from floodside ROW expansion and construction of levees. Although some construction will occur in cleared areas and on existing levees, project implementation will also directly impact swamps that provide high habitat value for diverse fish and wildlife resources. Impacts resulting from borrow pit creation are being addressed in separate IERs, therefore, impacts, mitigation, and Service recommendations concerning borrow pits will not be included in this report.

Impacts to swamp were quantified by acreage and habitat quality (i.e., average annual habitat unit or AAHUs) and are presented in Table 1. The Service used the Habitat Assessment Methodology (HAM) (Louisiana Department of Natural Resources 1994) to quantify the impacts of proposed flood protection features. The habitat assessment model for swamp within the Louisiana Coastal Zone utilized in this evaluation was modified from those developed in the Service's Habitat Evaluation Procedures (HEP) (U.S. Fish and Wildlife Service 1980). For each

habitat type, those models define an assemblage of variables considered important to the suitability of an area to support a diversity of fish and wildlife species. The HAM, however, uses a community-level evaluation approach instead of the species-based approach used with HEP. Further explanation of how impacts/benefits are assessed with HAM, and an explanation of the assumptions affecting habitat suitability (i.e., quality) index (HSI) values for each target year, are available for review at the Service’s Lafayette, Louisiana, Field Office.

As indicated in Table 1, our HAM analyses determined that the proposed changes to the project would result in the additional direct loss of 42 acres of swamp (24 AAHUs). Total project impacts with the proposed modifications would result in the direct loss of 90.5 acres of bottomland hardwoods (67.17 AAHUs) and 71.75 acres of swamp (41 AAHUs).

Table 1: Impacts of IER 14 (Westwego to Harvey Levee) Jefferson Parish, 100-year Level Protection

Levee Reach	IER 14 Prior Impacts (acres) and Habitat Type	IER 14 Total Impacts, including supplemental (acres) and Habitat Type	AAHUs lost
WBV 14c	0	42	24
WBV 14b.	29.75, swamp	29.75, swamp	17.02
WBV 14f	45.5, blh ¹	45.5, blh ¹	37.17 ³
WBV 14d	0.5, blh	0.5, blh	0.33
WBV 14e	44.5, blh ²	44.5, blh ²	29.67
Total	120.25	162.25	108.19

¹blh = bottomland hardwoods

²The Corps classified this area as swamp based in part on the presence of cypress in the canopy, however, the Service assessed this area as blh because of the altered wetland functions and the greater number of co-dominant blh tree species which prevented the use of the swamp assessment model.

³The AAHUs for 14f were previously incorrectly calculated to be 18.58.

FISH AND WILDLIFE CONSERVATION MEASURES

The President's Council on Environmental Quality defined the term "mitigation" in the National Environmental Policy Act regulations to include:

- (a) avoiding the impact altogether by not taking a certain action or parts of an action;
- (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- (d) reducing or eliminating the impact over time by preservation and maintenance operations during

the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

The Service supports and adopts this definition of mitigation and considers its specific elements to represent the desirable sequence of steps in the mitigation planning process. Based on current and expected future without-project conditions, the planning goal of the Service is to develop a balanced project, i.e., one that is responsive to demonstrated hurricane protection needs while addressing the co-equal need for fish and wildlife resource conservation.

The Service's Mitigation Policy (Federal Register, Volume 46, No. 15, January 23, 1981) identifies four resource categories that are used to ensure that the level of mitigation recommended by Service biologists will be consistent with the fish and wildlife resource values involved. Considering the high value of swamp for fish and wildlife and the relative scarcity of that habitat type, those wetlands are usually designated as Resource Category 2 habitats, the mitigation goal for which is no net loss of in-kind habitat value. Toward that end, the Service recommends that the following planning objectives be adopted to guide future project studies.

1. Conserve important fish and wildlife habitat (i.e., bottomland hardwoods, cypress swamps) by minimizing the acreage of those habitats directly affected by flood control features.
2. Ensure impacts and encroachment onto National Park Service lands are avoided. Unavoidable impacts and encroachments, when permissible should be minimized and appropriately mitigated.
3. Future maintenance and associated activities (e.g., staging areas, access routes, pipeline lowerings, etc.) should be identified, planned and coordinated with the JLNHPP staff to avoid future potential impacts to National Park Service lands.
3. Fully compensate for any unavoidable losses of wetland habitat or non-wet bottomland hardwoods caused by project features.

SERVICE POSITION AND RECOMMENDATIONS

The Service does not object to providing improved hurricane protection to the Greater New Orleans area and the proposed changes to EIR 14 provided the following fish and wildlife conservation recommendations and those provided in our August 18, 2008, report are incorporated into future project planning and implementation. Recommendations that were provided in that report but are not relevant to proposed project modification have been omitted.

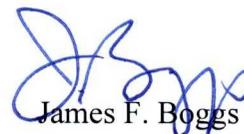
1. To the greatest extent possible, situate flood protection features so that destruction of wetlands and non-wet bottomland hardwoods are avoided or minimized.
2. Ensure impacts and encroachment onto National Park Service lands are avoided.

Unavoidable impacts and encroachments, when permissible by that agency, should be minimized and appropriately mitigated. Point of contact for the National Park Service (NPS) is Chief of Resource Management David Muth (504) 589-3882 extension 128, (david_muth@nps.gov)

3. Future maintenance and associated activities (e.g., staging areas, access routes, pipeline lowerings, etc.) should be identified, planned and coordinated with the JLNHPP staff to avoid future potential impacts to National Park Service lands.
4. Forest clearing associated with project features should be conducted during the fall or winter to minimize impacts to nesting migratory birds, when practicable.
5. The project's first Project Cooperation Agreement (or similar document) should include language that specifies the responsibility of the local-cost sharer to provide operational, monitoring, and maintenance funds for mitigation features.
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 Service, NMFS, LDWF, Environmental Protection Agency (EPA) and Louisiana Department of Natural Resources (LDNR). The Service shall be provided an opportunity to review and submit recommendations on the all work addressed in those reports.
7. If a proposed project feature is changed significantly or is not implemented within one year of the date of our Endangered Species Act consultation letter, we recommend that the Corps reinitiate coordination with this office to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.
8. The Corps shall fully mitigate for any unavoidable losses of wetlands (108.19 AAHUs) caused by project features. Development and implementation of those mitigation plans should be done in concert with the Service and other resource agencies. To the extent feasible, impacts to Federal lands should be mitigated on Federal lands within the vicinity of IER 14.

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

Sincerely,



James F. Boggs
Supervisor
Louisiana Field Office

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

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U.S. Fish and Wildlife Service. 1980. Habitat evaluation procedures. U.S. Fish and Wildlife Service, Division of Ecological Services, Washington, D.C. Ecological Services Manual 102.

Appendix C

Members of Interagency Environmental Team

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