

DRAFT INDIVIDUAL ENVIRONMENTAL REPORT SUPPLEMENTAL

GIWW, HARVEY, AND ALGIERS LEVEES AND FLOODWALLS JEFFERSON, ORLEANS, AND PLAQUEMINES PARISHES, LOUISIANA

IERS # 12.a



**US Army Corps
of Engineers®**

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1. INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), has prepared this Supplemental to Individual Environmental Report #12 (IERS #12.a) to evaluate the potential construction impacts associated with the proposed project revisions to the original IER #12 Gulf Intracoastal Waterway (GIWW), Harvey and Algiers Levees and Floodwalls project area. Proposed design changes since the original IER #12 GIWW, Harvey and Algiers Levees and Floodwalls Jefferson, Orleans, and Plaquemines Parishes, Louisiana document (IER #12 section 2.3: Proposed Action, Western Earthen Levee Enlargement) would result in additional impacts not addressed in IER #12. Those modifications and anticipated impacts are discussed in this supplemental. The proposed action and the area of impact are located within the IER #12 project area in Jefferson Parish, LA. (Figure 1)

The Harvey-Westwego, Gretna-Algiers, and Belle Chasse Interagency Performance Evaluation Task Force (IPET) polders are located within the Orleans, Jefferson and Plaquemines parishes. The total estimated population for these three parishes in 2006 was 687,261.

It is also important to note the presence of the U.S. Environmental Protection Agency (EPA) designated Bayou aux Carpes Clean Water Act (CWA) Section 404(c) area within this Westbank and Vicinity (WBV) project area. (Figure 2) These nationally significant wetlands are protected under the Clean Water Act (CWA, 33 U.S.C. 1251 et seq) Section 404(c), which authorizes the administrator of the EPA to deny or restrict the use of any defined area for specification as a disposal site, whenever the administrator determines, after notice and opportunity for public hearings, that the discharge of such materials into such area would have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. All potential impacts to this unique environment associated with the proposed action are thoroughly explained in IER #12, sections 3.1.7, 3.2.2, 6, 7, and Appendix K. There are no impacts to the Bayou aux Carpes area as a result of the proposed action in this supplemental.

This supplemental to IER #12 has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality's Regulations (CEQ) (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's NEPA Implementation Regulations (40 CFR §1506.11). Under the provisions of the CEQ NEPA regulations (40 CFR §1506.11), the CEMVN implemented Alternative Arrangements on March 13, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the NEPA (40 CFR §1506.11).

This process was implemented in order to expeditiously complete environmental analysis for any changes to the authorized system and the 100-year level of the Hurricane and Storm Damage Risk Reduction System (HSDRRS), formerly known as the Hurricane Protection System (HPS) authorized and funded by Congress and the Administration. The term “100-year level of risk reduction,” as it is used throughout this document, refers to a level of risk reduction 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. The proposed actions are located in southeast 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.

IER 12 Study Area

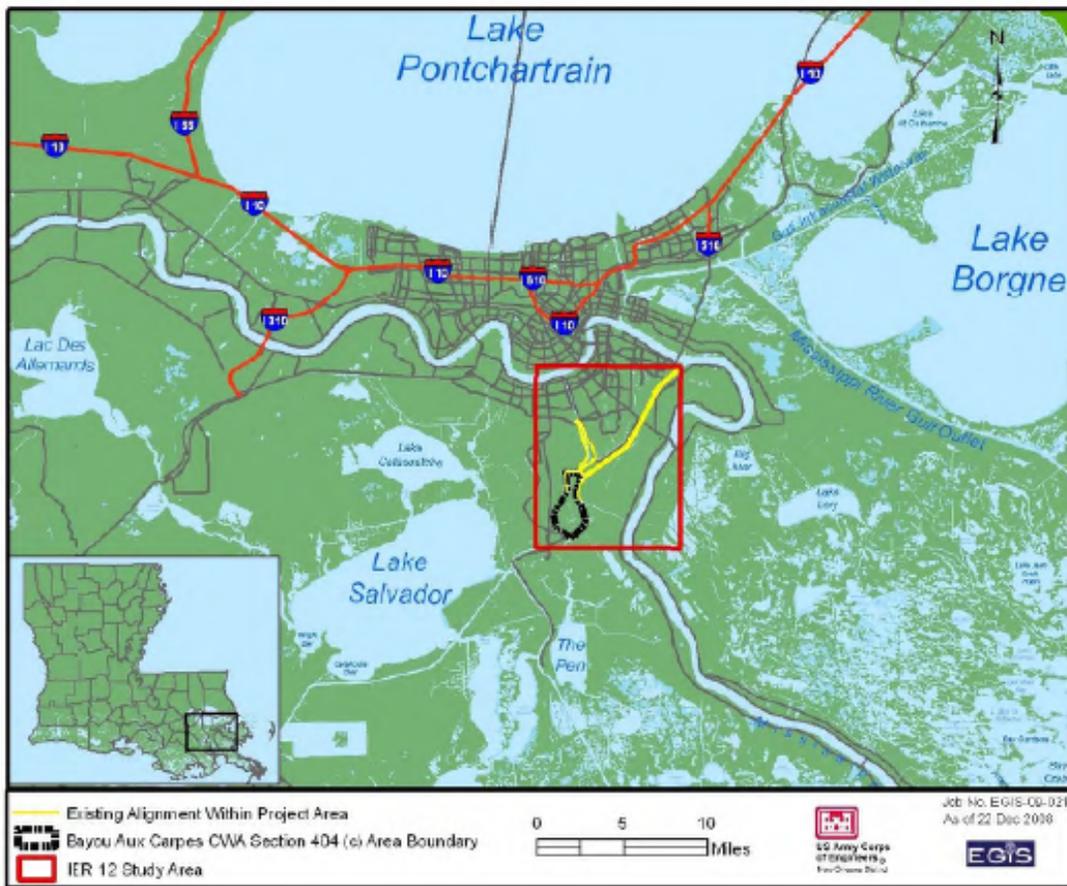


Figure 1: IER 12 Project Area

On February 18, 2009, the CEMVN Commander signed the Decision Record for IER #12. IER #12 is incorporated by reference into this amended supplemental document. Copies of IER #12 and other supporting information are available upon request or at www.noloaenvironmental.gov. This supplemental document has been prepared to address proposed changes in the Government’s approved plan.

This Draft IER Supplemental (IERS) will be distributed for a 30-day public review and comment period. If requested, a public meeting specific to the proposed action will be held during the review period for the purpose of answering questions and concerns regarding the proposed action. Any comments received during this public comment period will be considered part of official record. After the 30-day comment period the CEMVN Commander will review all comments received during the review period and make a determination if they rise to the level of being substantive in nature. If comments are not considered substantive, the Commander will make a decision on the proposed action. This decision will be documented in an IERS Decision Record.

If a comment(s) is determined to be substantive in nature, an Addendum to the IERS will be prepared and published for an additional 30-day public review and comment period. After the expiration of the public comment period the Commander will make a decision on the proposed action. The decision will be documented in an IERS Decision Record.

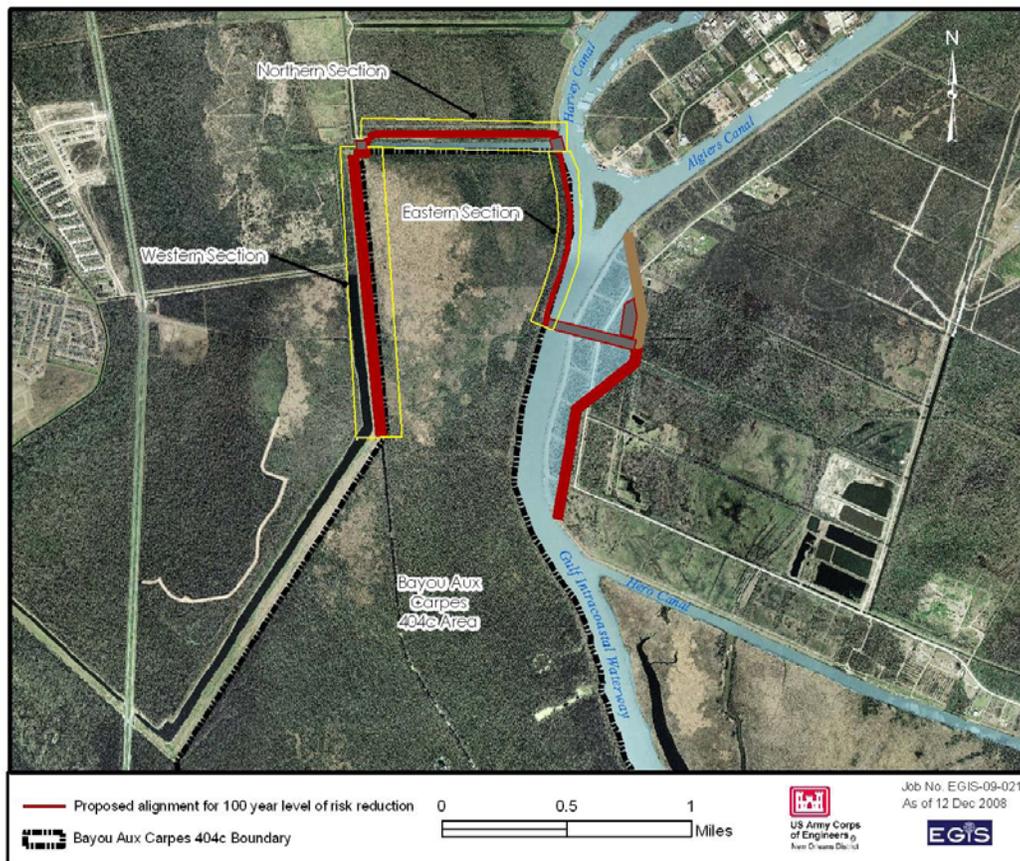


Figure 2: Bayou aux Carpes 404(c) Area

1.1 PRIOR REPORTS

A number of studies and reports on water resources development 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 are discussed below:

- On November 20, 2010, the CEMVN Commander signed a Decision Record on the Addendum to Draft IER Supplemental #12 entitled “GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana”. The document was prepared to evaluate the potential impacts associated with the temporary closure of the Belle Chase Tunnel.
- From September 3, 2010 to October 2, 2010 the CEMVN released for public review a Draft IER Supplemental #12 entitled “GIWW, Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana”. The document was prepared to evaluate the potential impacts associated with the use of the Site N borrow site for disposal. During the public review time frame some modifications were made resulting in the preparation on an Addendum to the report, which also was released for a 30-day public comment period.
- On February 3, 2009, the CEMVN Commander signed a Decision Record on IER #25 entitled “Government Furnished Borrow Material, Orleans, Plaquemines and Jefferson Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On January 21, 2009, the CEMVN Commander signed a Decision Record on IER #17, entitled “Company Canal Floodwall, Jefferson Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On December 4, 2009, the CEMVN Commander signed a Decision Record on IER #13, entitled “Hero Canal Levee and Eastern Tie-In, Plaquemines Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On February 18, 2009, the CEMVN Commander signed a Decision Record on IER #12, entitled “Gulf Intracoastal Waterway (GIWW), Harvey and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On October, 20 2008, the CEMVN Commander signed a Decision Record on IER #26 entitled “Pre-Approved Contractor Furnished Borrow Material #3, Jefferson, Plaquemines, and St. John the Baptist Parishes, Louisiana, and Hancock County,

Mississippi.” The document was prepared to evaluate the potential impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.

- On August 26, 2008, the CEMVN Commander signed a Decision Record on IER #14, entitled “Westwego to Harvey, Levee Jefferson Parish, Louisiana.” The document was prepared to examine the potential environmental impacts associated with the proposed construction and maintenance of 100-year level of risk reduction along the WBV, Westwego to Harvey Levee project area.
- On June 12, 2008, the CEMVN Commander signed a Decision Record on IER #15, entitled “Lake Cataouatche Levee, Jefferson Parish, Louisiana.” The proposed action includes providing 100-year level of risk reduction in the project area.
- On May 30, 2008, the CEMVN Commander signed a Decision Record on IER #22 entitled “Government Furnished Borrow Material, Plaquemines and Jefferson Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On May 6, 2008, the CEMVN signed a Decision Record on IER #23 entitled “Pre-Approved Contractor Furnished Borrow Material #2, St. Bernard, St. Charles, Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- On February 21, 2008, the CEMVN Commander signed a Decision Record on IER #18 entitled “Government Furnished Borrow Material, Jefferson, Orleans, Plaquemines, St. Charles, and St. Bernard Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with the actions taken by the USACE as a result of excavating borrow areas for use in construction of the HSDRRS.
- On February 14, 2008, the CEMVN Commander signed a Decision Record on IER #19 entitled “Pre-Approved Contractor Furnished Borrow Material, Jefferson, Orleans, St. Bernard, Iberville, and Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential impacts associated with the actions taken by commercial contractors as a result of excavating borrow areas for use in construction of the HSDRRS.
- In July 2006, the CEMVN Commander signed a Finding of No Significant Impact (FONSI) on EA #433 entitled, “USACE Response to Hurricanes Katrina & Rita in Louisiana.” The document was prepared to evaluate the potential impacts

associated with the actions taken by the USACE as a result of Hurricanes Katrina and Rita.

- On August 23, 2005, the CEMVN Commander signed a FONSI on EA #422 entitled “Mississippi River Levees – West Bank Gaps, Concrete Slope Pavement Borrow Area Designation, St. Charles and Jefferson Parishes, Louisiana.” The report investigates the impacts of obtaining borrow material from various areas in Louisiana.
- On February 22, 2005, the CEMVN Commander signed a FONSI on EA #306A entitled “West Bank Hurricane Protection Project – East of the Harvey Canal, Floodwall Realignment and Change in Method of Sector Gate.” The report discusses the impacts related to the relocation of a proposed floodwall moved because of the aforementioned sector gate, as authorized by the LPV Project.
- On May 5, 2003, the CEMVN Commander signed a FONSI on EA #337 entitled “Algiers Canal Alternative Borrow Site.”
- On June 19, 2003, the CEMVN Commander signed a FONSI on EA #373 entitled “Lake Cataouatche Levee Enlargement.” The report discusses the impacts related to improvements to a levee from Bayou Segnette State Park to Lake Cataouatche.
- On May 16, 2002, the CEMVN Commander signed a FONSI on EA #306 entitled “West Bank Hurricane Protection Project - Harvey Canal Sector Gate Site Relocation and Construction Method Change.” The report discusses the impacts related to the relocation of a proposed sector gate within the Harvey Canal, as authorized by the LPV Project.
- On August 30, 2000, the CEMVN Commander signed a FONSI on EA #320 entitled “West Bank Hurricane Protection Features.” The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Project.
- On August 18, 1998, the CEMVN Commander signed a FONSI on EA #258 entitled “Mississippi River Levee Maintenance - Plaquemines West Bank Second Lift, Fort Jackson Borrow Site.”
- The final EIS for the WBV, East of Harvey Canal, Hurricane Protection Project was completed in August 1994. A Record of Decision (ROD) was signed by the CEMVN Commander in September 1998.
- The final EIS for the WBV, Lake Cataouatche, Hurricane Protection Project was completed. A ROD was signed by the CEMVN Commander in September 1998.
- In December 1996, the USACE completed a post-authorization change study entitled, “Westwego to Harvey Canal, Louisiana Hurricane Protection Project

Lake Cataouatche Area, EIS.” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between Bayou Segnette and the St. Charles Parish line. A Standard Project Hurricane (SPH) level of risk reduction was recommended along the alignment followed by the existing non-Federal levee. The project was authorized by Section 101 (b) of the WRDA of 1996 (P.L. 104-303) subject to the completion of a final report of the Chief of Engineers, which was signed on 23 December 1996.

- On January 12, 1994, the CEMVN Commander signed a FONSI on EA #198 entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, LA, Hurricane Protection Project, Westwego to Harvey Canal, Jefferson Parish, Louisiana, Proposed Alternate Borrow Sources and Construction Options.” The report evaluates the impacts associated with borrow sources and construction options to complete the Westwego to Harvey Canal Hurricane Protection Levee.
- In August 1994, the CEMVN completed a feasibility report entitled “WBV (East of the Harvey Canal).” The study investigated the feasibility of providing hurricane surge protection to that portion of the west bank of metropolitan New Orleans from the Harvey Canal eastwards to the Mississippi River. The final report recommends that the existing West Bank Hurricane Project, Jefferson Parish, Louisiana, authorized by the WRDA of 1986 (P.L. 99-662), approved November 17, 1986, be modified to provide additional hurricane protection east of the Harvey Canal. The report also recommends that the level of risk reduction for the area east of the Algiers Canal deviate from the National Economic Development Plan’s level of risk reduction and provide protection for the SPH. The Division Engineer’s Notice was issued on September 1, 1994. The Chief of Engineer’s report was issued on 1 May 1995. Preconstruction, engineering, and design was initiated in late 1994 and is continuing. The WRDA of 1996 authorized the project.
- On March 20, 1992, the CEMVN Commander signed a FONSI on EA #165 entitled “Westwego to Harvey Canal Disposal Site.”
- In February 1992, the USACE completed a reconnaissance study entitled “West Bank Hurricane Protection, Lake Cataouatche, Louisiana.” The study investigated the feasibility of providing hurricane and storm damage risk reduction to that portion of the west bank of the Mississippi River in Jefferson Parish, between Bayou Segnette and the St. Charles Parish line. The study found a 100-year level of risk reduction to be economically justified based on constructing a combination levee/ sheetpile wall along the alignment followed by the existing non-Federal levee. Due to potential impacts to the Westwego to Harvey Canal project, the study is proceeding as a post-authorization change.
- On June 3, 1991, the CEMVN Commander signed a FONSI on EA #136 entitled “West Bank Additional Borrow Site between Hwy 45 and Estelle PS.”

- On March 15, 1990, the CEMVN Commander signed a FONSI on EA #121 entitled “West Bank Westwego to Harvey Changes to EIS.” The report addresses the impacts associated with the use of borrow material from Fort Jackson for LPV construction. The material was used for constructing the second lift for the Plaquemines West Bank levee upgrade, as part of LPV construction.
- IER #29 entitled “LPV Hurricane Protection – South Point to GIWW Levee Enlargement” was signed by the CEMVN Commander on June 12, 1987. The report discusses the impacts associated with the enlargement of the GIWW.
- In December 1986, the USACE completed a Feasibility Report and EIS entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, LA.” The report investigates the feasibility of providing hurricane surge protection to that portion of the west bank of the Mississippi River in Jefferson Parish between the Harvey Canal and Westwego, and down to the vicinity of Crown Point, Louisiana. The report recommends implementing a plan that would provide SPH level of risk reduction to an area on the west bank between Westwego and the Harvey Canal north of Crown Point. The project was authorized by the WRDA of 1986 (P.L. 99-662). Construction of the project was initiated in early 1991.
- On October 16, 1985, the Environmental Protection Agency (EPA) signed a Final Determination concerning the Bayou aux Carpes Site in Jefferson Parish pursuant to Section 404(c) of the Clean Water Act (CWA). The authority for this determination was given to the Administrator of the EPA under the CWA (33 USC, 1251 et seq).

2. ALTERNATIVES

NEPA requires that in analyzing alternatives to a proposed action a Federal agency consider an alternative of “No Action.” Likewise, Section 73 of the WRDA of 1974 (PL 93-251) requires Federal agencies to give consideration to non-structural measures to reduce or prevent flood damage. The CEMVN Project Delivery Team (PDT) considered a No Action alternative and non-structural measures, which are discussed in IER #12, sections 2.4.1 and 2.5.2, respectively.

2.1 DESCRIPTION OF THE ALTERNATIVES

The CEMVN action approved in IER #12, the Gulf Intracoastal Waterway West Closure Complex (WCC) alternative, signed by the CEMVN District Commander on 18 February 2009 consists of constructing a streamlined surge barrier consisting of 3 miles of levees and floodwalls on the GIWW approximately one mile below the intersection of the Hero and Algiers Canals. The WCC would prevent storm surge from entering the Algiers and Hero Canals and would remove the 25 miles of levees and floodwalls along those canals

from the primary line of defense. After the WCC construction is complete, those canals would serve as a rainwater detention basin when the WCC is closed during storm events.

The western section of this alignment extends north from approximately 6000 feet northeast of the V-Line Levee intersection with Highway 45 in Jefferson Parish to the Old Estelle Pump Station (PS). This section includes the V-Line Levee Canal, a 200 foot wide by 15 foot deep interior drainage canal, on the protected side of the levee and the Bayou aux Carpes CWA Section 404(c) area on the flood side. The proposed action for this section, as outlined in IER #12, consists of an earthen levee enlargement with a protected side shift, partially outside of existing ROW. The centerline of the new levee would be shifted 58 feet to the protected side of the centerline of the existing levee. This 5900 foot earthen levee stretch would be raised to 100-year level of risk reduction, with a design elevation of approximately 14 feet. To accommodate the shifts of the canal and the levee, an additional 125 feet of permanent ROW into a Bottomland Hardwood (BLH) area would be required along the V-line levee to the Old Estelle PS. The IER #12 proposed action would require the relocation of the existing V-Line Levee drainage canal 200 feet to the protected side which would directly impact 10.5 acres of BLH. The additional ROW required to upgrade the levee and relocate the drainage canal would be 17 acres of BLH. The levee would tie into the fronting protection at Old Estelle PS. This enlargement would directly impact a total of 27.5 acres of BLH west of the V-Line Levee Canal.

All of the construction work would occur on the protected side of the levee and would not impact the Bayou aux Carpes CWA Section 404(c) area.

2.1.1 No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal would proceed as described in IER #12. This earthen levee stretch would be raised to 100-year level of risk reduction, with a design elevation of approximately 14 feet. The centerline of the new levee would shift 58 feet to the protected side of the centerline of the existing levee. An additional 125 feet of permanent ROW into a Bottomland Hardwood (BLH) area would be used along the V-line levee to the Old Estelle PS, impacting 17 acres of BLH. The V-Line Levee Canal would be relocated 200 feet to the protected side of its current location, directly impacting 10.5 acres of BLH and the existing drainage canal would be filled in. The levee would tie into the fronting protection at Old Estelle PS.

Under the No Action alternative, there would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the Jefferson Parish Drainage Department (JPDD) Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction of the HSDRRS project features and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

Transportation impacts related to the construction of the HSDRRS have been analyzed in a report titled “Transportation Report for the Construction of the 100- year Hurricane and Storm Damage Risk Reduction System,” which was released in March, 2010 and is available on www.nolaenvironmental.gov.

2.1.2 Proposed Action

The proposed action consists of an earthen levee enlargement of the V-Line Levee with the centerline of the existing levee being shifted from approximately 0 - 30 feet (or possibly more) to the protected side, rather than the 58 feet originally proposed in IER #12. The earthen levee stretch would be raised to 100-year level of risk reduction, with an ultimate design elevation of approximately 14 feet (design may include additional overbuild material as needed to allow for settlement to an ultimate elevation of 14 feet). All work on the levee would be conducted within the existing ROW so there would be no need for new ROW.

To access the levee reaches, the USACE Contractor would construct a permanent access road that may include a combination sand base and crushed stone surfacing to accommodate the USACE Contractor’s truck haul operation along the JPDD Canal-C off Louisiana Highway 3134 (LA HWY 3134). The potential access road would be constructed within the JPDD drainage servitude extending from LA HWY 3134 to the V-Line Levee Canal. (Figure 3) The JPDD Canal-C servitude and associated ROW is an approximately one mile long by 100-foot wide stretch of non wetland, grassy area bordering the drainage canal maintained and utilized by JPDD for on-going maintenance purposes.

The access road would extend from LA HWY 3134 in an east-west direction along the southern edge of the JPDD Canal-C to the V-Line Levee Canal. The road would contain a minimum clearance of 15-feet from the JPDD Canal-C bankline and a minimum clearance of 5-feet from the tree line so that existing BLH would not be disturbed. If the Contractor elects to construct a substantial haul road, it would consist of three features: spillway sand base, geotextile fabric and a 7-inches minimum of crushed stone surfacing.

An 8-foot wide by 15-foot long truck washdown rack would be constructed at the exit point of the access road near LA HWY 3134, at the point of vehicular egress, to reduce the amount of mud transported onto the paved highway. (Figure 4) During the haul operation, a mechanical sweeper would be on standby at the highway entrance from the site to assist in routine cleaning of the highway. The wash rack would be constructed away from the JPDD Canal-C bank, closer to Highway 3134 so waste material from the construction vehicles would not be allowed to drain into the canal. To help ensure waste material does not enter the canal, a retention barrier would be constructed using either hay bales, an earthen embankment, or similar material, to collect any waste material from the tires of the construction vehicles. Upon completion of the project, the wash rack would be removed and the area returned to preconstruction status, with the exception of the improved road, which would remain in place for use by the JPDD.

A modular, shallow draft, pontoon style bridge, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 Levee Reaches project site. (Figure 5)

The pontoon bridge would measure no more than 50-feet wide by 228-feet long by 3-feet 10-inches deep. The bridge is a modular, shallow-draft system that combines interlocking flotation modules and accessory attachments that are assembled into platforms shaped and equipped for specific construction phases. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary. The bridge system does not significantly reduce head-loss in the drainage system.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal because the protected side shift would be reduced. To provide added levee stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 Levee Reaches project site. (Figures 6 and 7) Graded stone shall be placed in pieces weighing not less than 6 pounds each and no more than 200 pounds each. Each shipment shall be graded approximately as follows:

By Weight:

150 Pounds to 200 Pounds	5 percent Maximum
125 Pounds to 149 Pounds	5 percent to 15 percent
75 Pounds to 124 Pounds	15 percent to 40 percent
25 Pounds to 74 Pounds	40 percent to 55 percent
Under 25 Pounds	10 percent Maximum

Within this reach, the riprap placement would be approximately 850-feet in length and 55-feet in width from the top of canal bank, extending approximately 25 feet into the canal water. The Contractor would use a backhoe with a bucket and place the riprap along the east bankline of the drainage canal. Access to the rock placement site would be via the protected side of the existing WBV 14e.2 levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.



Figure 3: Proposed Access Road



Figure 4: Location of Truck Washdown Rack

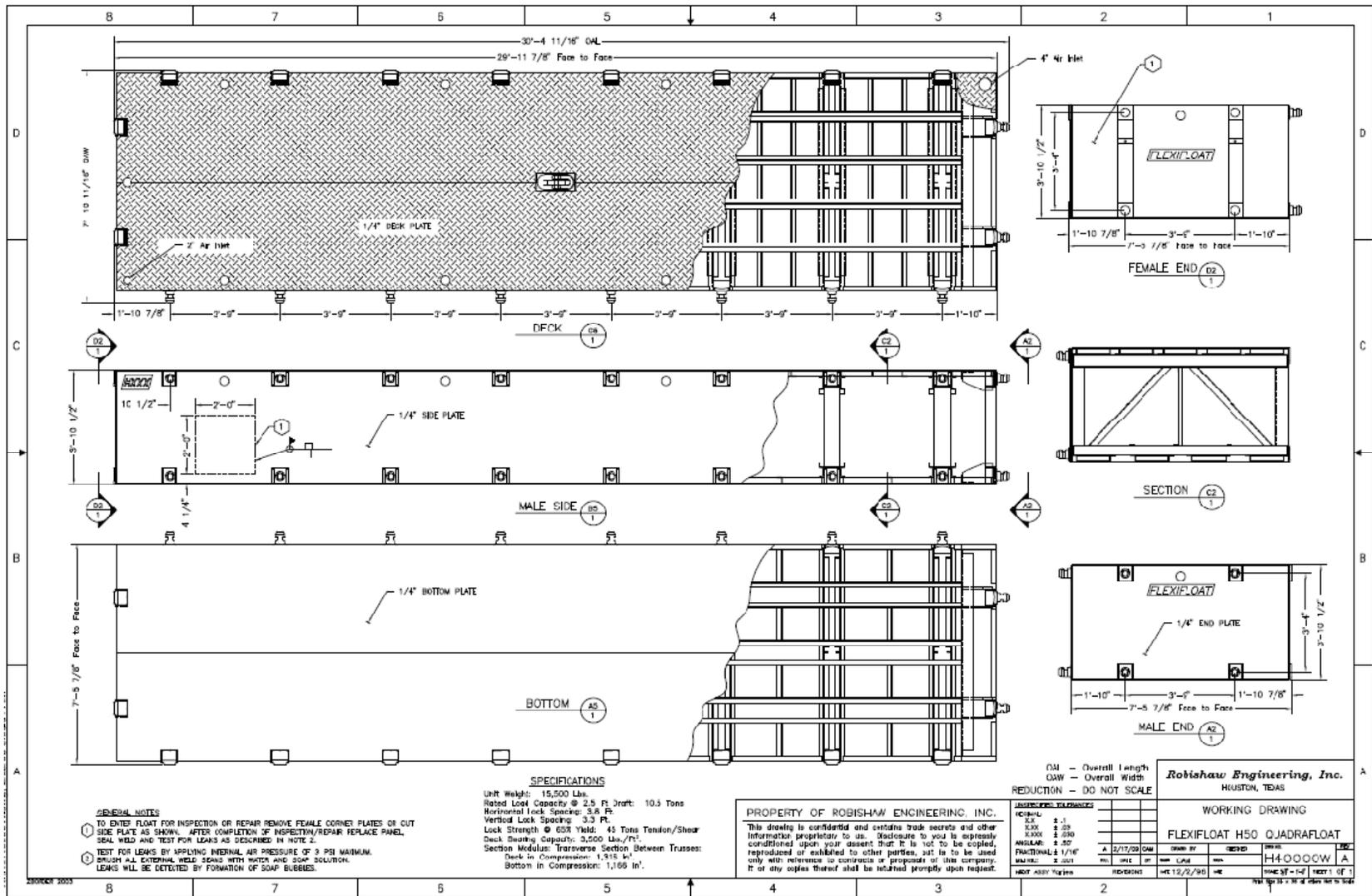


Figure 5: Float Bridge

WBV 14e.2 Project Reaches

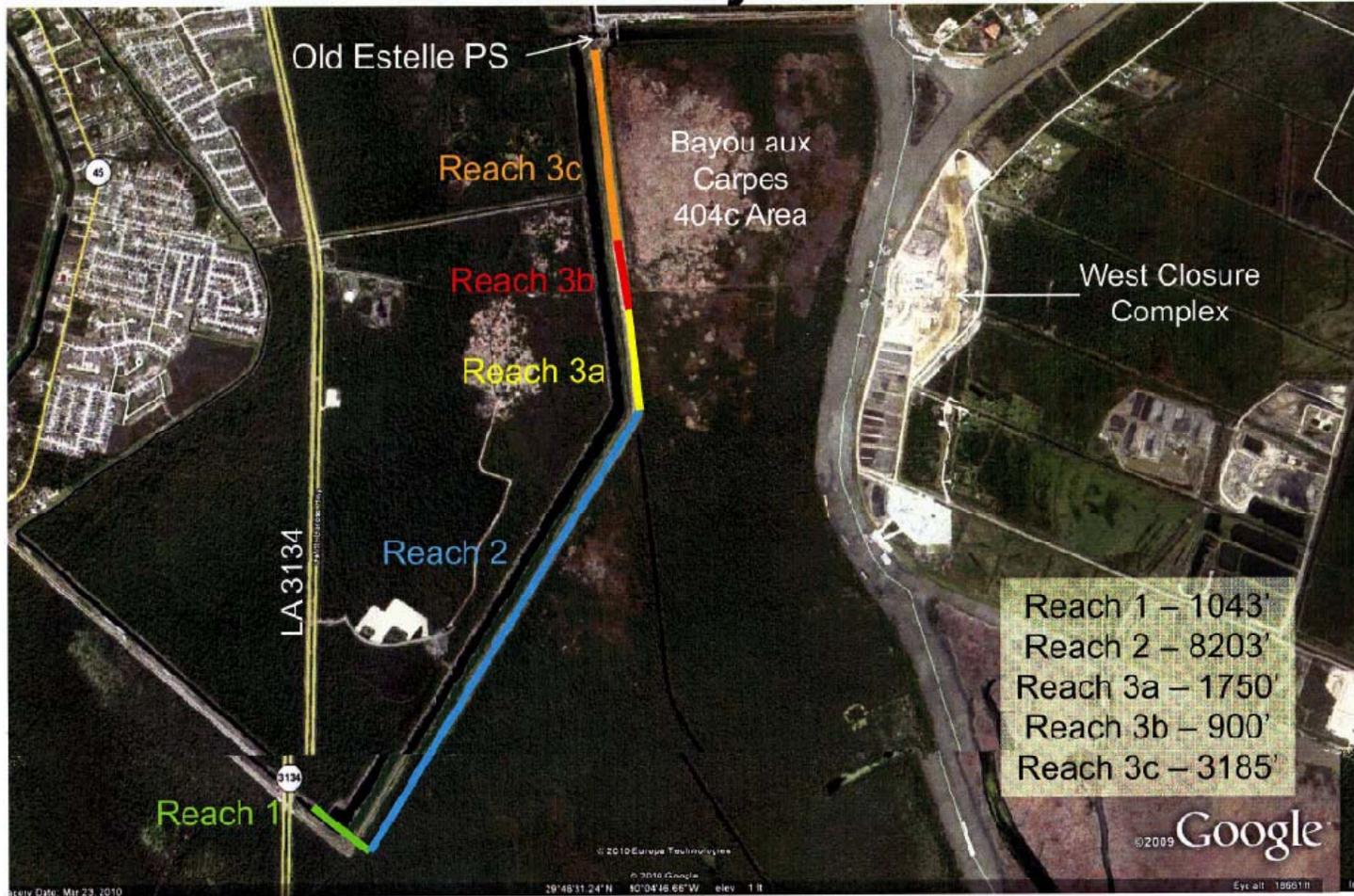
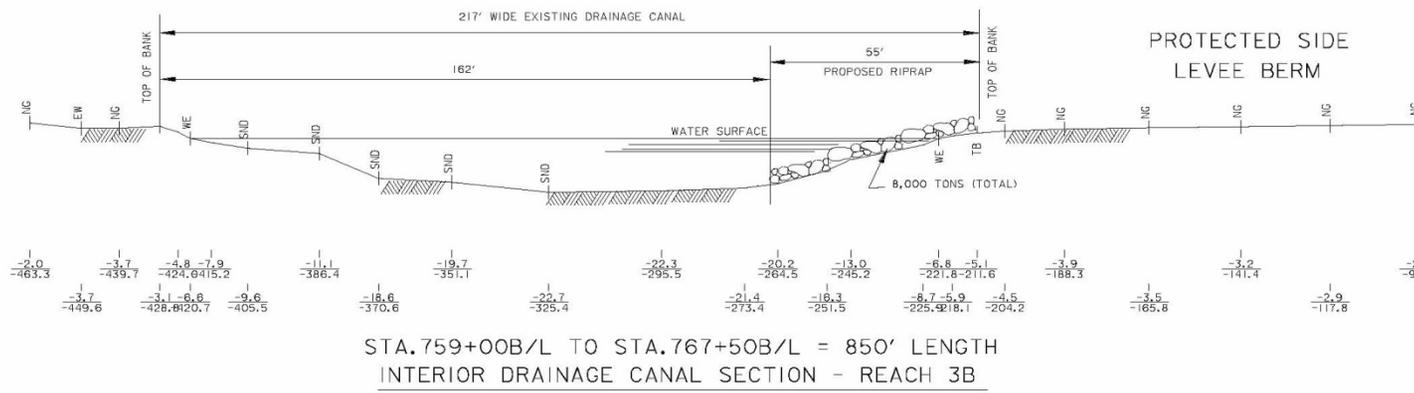


Figure 6: Rip Rap Placement in WBV 14e.2, Reach 3B



CONSTRUCTION METHOD

The Contractor will use the existing levee protected side berm for a truck haul operation to the point of placement. Upon offloading riprap and stockpiling on the levee protected side berm, the Contractor will use a backhoe with bucket and conduct a land based operation of lifting and place riprap along existing drainage canal east bank line.

Figure 7: Rip Rap Placement in V-Line Levee Canal

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 ENVIRONMENTAL SETTING

The area of the proposed action described in this report is located in Jefferson Parish, Louisiana. The WBV 14e.2 Levee Reaches, the V-Line Levee Canal and the JPDD Canal-C are bounded to the north by the Mississippi River, to the west by Lake Cataouatche and eventually marsh, and to the south by the town of Lafitte. The area is bordered on three sides by an extensive marsh system that provides a barrier between residences and infrastructure within Southeast Louisiana and the Gulf of Mexico.

IER #12 GIWW, Harvey and Algiers Levees and Floodwalls contains a complete discussion of the environmental setting for the project area and is incorporated by reference into this document.

3.2 SIGNIFICANT RESOURCES

This section contains a list of the significant resources located in the vicinity of the proposed action, and describes in detail those resources that would be impacted, directly or indirectly, by the alternatives. Direct impacts are those that are caused by the action taken and occur at the same time and place (40 CFR §1508.8(a)). Indirect impacts are those that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR §1508.8(b)). Cumulative impacts are discussed in Section 4. Except where specifically stated, the significant resource analysis contained in IER 12 GIWW, Harvey and Algiers Levees and Floodwalls Jefferson, Orleans, and Plaquemines Parishes, Louisiana document remains the same and is incorporated by reference herein.

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of national, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Further detail on the significance of each of these resources can be found by contacting the CEMVN, or on www.nolaenvironmental.gov, which offers information on the ecological and human value of these resources, as well as the laws and regulations governing each resource. Search for “Significant Resources Background Material” in the website’s digital library for additional information. Table 1 shows those significant resources found within the project area, and notes whether they would be impacted by the proposed alternative.

Table 1: Significant Resources in the Project Area

SIGNIFICANT RESOURCES	Impacted	Not Impacted
Wetlands		X
Bottomland Hardwood		X
Bayou aux Carpes CWA Section 404(c) Area		X
Upland Resources		X
T&E Species		X
Fisheries		X
Wildlife		X
Air Quality	X	
Water Quality	X	
Noise	X	
Aesthetics		X
Recreational Resources		X
Cultural Resources		X
Socioeconomics		X

3.2.1 Jurisdictional Wetlands

Existing Conditions

Jurisdictional wetlands are those that are regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. To qualify as jurisdictional wetlands, habitat must exhibit all three wetland characteristics: hydrology, hydrophytes, and hydric soils (US ACOE 1987). It is important to understand that some areas that function as wetlands ecologically, but exhibit only one or two of the three characteristics, do not currently qualify as Corps jurisdictional wetlands and thus activities in these wetlands are not regulated under the Section 404 program. Such wetlands, however, may perform valuable functions.

The jurisdictional wetland habitat types in the WBV 14e.2 Levee Reaches, the V-Line Levee Canal and the JPDD Canal-C project area may include pasture wetlands and cypress swamps. The jurisdictional wetlands contain hydrophytic vegetation, hydric soils, and hydrology indicators. Pasture wetlands are comprised of soft rushes, flat sedges, smartweed, alligator weed, and other wetland grasses. Cypress swamp areas are dominated by bald cypress and tupelo gum. The jurisdictional bottomland hardwood tree species include hackberry, Chinese tallow tree, pecan, American elm, live oak, water oak, green ash, bald cypress, black willow, box elder, and red maple.

There are jurisdictional wetlands in the vicinity of the WBV 14e.2 Levee Reaches, the V-Line Levee Canal and the JPDD Canal-C project area, located in the Clean Water Act Section 404(c) area on the flood side of the V-Line Levee.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 levee reach would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be no direct impacts to jurisdictional wetlands through the No Action alternative at the WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more but staying within existing ROW) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. The riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the newly constructed

access road. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement via backhoe.

There would be no direct or indirect impacts to jurisdictional wetlands through the newly proposed actions at the WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

3.2.2 Non-Jurisdictional Bottomland Hardwood Forest

Existing Conditions

Non-jurisdictional Bottom Land Hardwood (BLH) forests are comprised of dominant species such as hackberry, Chinese tallow, pecan, American elm, live oak, water oak, green ash, bald cypress, black willow, box elder, and red maple. Some understory species include dewberry, lizard's tail, and poison ivy. A variety of birds utilize these hardwoods for nesting, breeding, brooding, and as perches. Hard mast (nuts) and soft mast (samaras, berries) provide a valuable nutritional food source for birds, mammals, and other wildlife species.

Non-jurisdictional BLH forests lack one or more of the following criteria to be considered a Clean Water Act Section 404 wetland: hydrophytic vegetation, hydric soils, and/or wetland hydrology (USACE 1987). There are BLH forests in the project area on the western side of the V-Line levee canal and bordering either side of the JPDD Canal C servitude; however the quality of the BLH habitat in much of the project area has been affected by previous levee construction or development activities with the exception of the wetlands within the Bayou aux Carpes CWA Section 404(c) area. This BLH in the project area is considered to be a lower quality habitat than the BLH in the 404(c) area because it has been altered (impounded) for over 20 years.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be permanent direct impacts to non-jurisdictional BLH forests through the No Action alternative. This enlargement would directly impact a total of 10.5 acres of altered BLH west of the V-Line Levee Canal that runs along the western edge the Bayou aux Carpes CWA Section 404(c) area. New ROW would be required on the west side of the V-Line Levee Canal which would directly impact 17 acres of BLH for a total direct impact to 27.5 acres of BLH. The details of this impact were discussed in IER #12, Section 3.2.1.2.2.1 General Discussion of Wetland Impacts due to the Proposed Action.

Under the No Action alternative, there would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be

impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which the area would experience a continued risk of levee failures and flooding.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, reevaluation of the designs determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. The riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the newly constructed access road. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement via backhoe.

Instead of the 27.5 acres of BLH impacts described in IER #12, there would be no direct or indirect impacts to non-jurisdictional BLH forests through the newly proposed actions at the WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

3.2.3 Non-Wetland Resources/Upland Resources

Existing Conditions

Species identified in the non-wet pasture areas of the project area include Johnson grass, yellow bristle grass, annual sumpweed, arrow-leaf sida, vasey grass, Brazilian vervain, and eastern false-willow. The scrub/shrub areas are comprised of Chinese tallow tree, eastern false-willow, wax myrtle, giant ragweed, dew berry, elderberry, red mulberry, pepper vine, and dog-fennel.

There are uplands in the WBV 14e.2 Levee and the V-Line Levee Canal project area, including within the JPDD Canal C ROW on either side of the drainage canal. Most areas that are non wetlands are the result of the deposition of soil fill for construction of levees, roads, railways, commercial development, residential development, golf courses, and the airfield; spoil from excavation of waterways; and landfill material. Other uplands on the west bank are a result of drained BLH habitat.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be direct impacts to non-wetland resources/upland resources through the No Action alternative at the WBV 14e.2 Levee Reaches and the V-Line Levee Canal project area. The details of this impact were discussed in IER #12, which can be found on the www.nolaenvironmental.gov website, Section 3.2.3.2.2 Upland Impacts due to the Proposed Action.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately

1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contactor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

There would be direct permanent impacts to non-wetland resources/upland resources through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. In addition to impacts to the V-Line levee within the existing ROW, approximately 4 acres of previously cleared uplands in the JPDD ROW alongside JPDD Canal-C would be permanently impacted with the placement of the access road.

3.2.4 Wildlife

Existing Conditions

The study area contains a great variety of mammals, birds, reptiles, and amphibians. Species inhabiting the area include nutria, muskrat, mink, otter, raccoon, white-tailed deer, skunks, rabbits, squirrels, armadillos, and a variety of smaller mammals. Wood ducks and some migratory waterfowl may be present during winter, especially in the proposed WBV 14e.2 Levee and the V-Line Levee Canal project location due to the close proximity of the area to the Bayou aux Carpes 404(c) area and the Mississippi River, which is a major flyway.

Non-game wading birds, shore birds, and sea birds including egrets, ibis, herons, sandpipers, willets, black-necked stilts, gulls, terns, skimmers, grebes, loons, cormorants, and white and brown pelicans are found in the project vicinity. Various raptors such as barred owls, red-shouldered hawks, northern harriers (marsh hawks), American kestrel, and red-tailed hawks may be present. Passerine birds in the areas include sparrows, vireos, warblers, mockingbirds, grackles, red-winged blackbirds, wrens, blue jays, cardinals, and crows. Many of these birds are present primarily

during periods of spring and fall migrations. The areas may also provide habitat for the American alligator, salamanders, toads, frogs, turtles, and several species of poisonous and nonpoisonous snakes. The existing ditches, canals, marshes, and Mississippi River batture provide suitable breeding habitat for various species of mosquitoes.

The bald eagle is a raptor that is found in various areas throughout the United States and Canada as well as throughout the study area. Bald eagles are federally protected under the Bald Eagle Protection Act of 1940. The bald eagle feeds on fish, rabbits, waterfowl, seabirds, and carrion (Ehrlich et al. 1988). The main basis of the bald eagle diet is fish, but they may feed on other items such as other birds and carrion depending upon availability of the various foods. Eagles require roosting and nesting habitat, which in Louisiana consists of large trees in fairly open stands (Anthony et al. 1982). Bald eagles nest in Louisiana from October through mid-May. Eagles typically nest in bald cypress trees near fresh to intermediate marshes or open water in the southeastern parishes.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reach would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be temporary direct impacts to wildlife in an around the construction area under the No Action Alternative. Details of this impact were discussed in IER #12, which can be found on the www.nolaenvironmental.gov website, Section 3.2.7.2.2.1 General Discussion of Wildlife Impacts due to the Proposed Action.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW. Accordingly, the anticipated BLH impacts discussed in IER #12 would not occur, preserving that potential habitat for wildlife.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway. Although approximately 4 acres of grassy ROW would be affected, the habitat value of the area is low and the impacts to wildlife would be expected to be minimal.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. Instead, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line. The addition of rip rap to a portion of the V-Line levee canal would be expected to have minimal impacts to wildlife.

There would be no direct or indirect impacts to wildlife through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

3.2.5 Threatened and Endangered Species

Existing Conditions

Although several Federal or state-listed threatened and endangered (T&E) species are dependent on the habitat types present in the study area, no Federally-listed endangered, threatened, or candidate species under USFWS jurisdiction presently occur in the project area. There is no critical habitat for any T&E species in the project area. Numerous rare migratory birds utilize project area habitats as stop-over points during migration (e.g., peregrine falcon). Other species specifically utilize the habitat for breeding and raising young (e.g., bald eagle). These species (Table 2) are highly dependent on BLH forest habitat found throughout the project area (Louisiana Department of Wildlife and Fisheries 2007). A bald eagle (*Haliaeetus leucocephalus*) nest was documented within the Bayou aux Carpes area in 2007. The bald eagle was

removed from the List of Endangered and Threatened Species but recommendations to minimize potential project impacts to the bird and its nest are provided by the USFWS in their National Bald Eagle Management Guidelines publication. The bald eagle continues to be protected under the Bald and Golden Eagle Protection Act and by the Migratory Bird Treaty Act.

Table 2: Species Found in BLH Habitat

Scientific Name	Common Name	Federal Status
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	Threatened
<i>Charadrius melodus</i>	Piping Plover	Endangered
<i>Charadrius melodus</i>	Pallid Sturgeon	Endangered
<i>Pelecanus occidentalis</i>	Brown Pelican	Endangered
<i>Trichechus manatus</i>	Manatee	Endangered

There may be a presence of brown pelicans in the vicinity of the proposed WBV 14e.2 Levee Reaches, JPDD Canal-C and V-Line Levee Canal project area. The brown pelican is a year-round resident that typically forages for and feeds on fish throughout the study area. In winter, spring, and summer, nests are built in mangrove trees or other shrubby vegetation, although occasional ground nesting may occur. Small coastal islands and sand bars are typically used as loafing areas and nocturnal roosting areas.

There have been no sightings of any T&E species in the WBV 14e.2 Levee Reaches, JPDD Canal-C and V-Line Levee Canal project area.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

There would be no direct or indirect impacts to T&E through the No Action alternative at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

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 3 January 2011.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reach would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

There would be no direct or indirect impacts to T&E through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area.

3.2.6 Cultural Resources

Existing Conditions

Records on file at the Louisiana Division of Archaeology and the CEMVN indicate six previously recorded archaeological sites are located within one mile of the IER # 12 project area. None of these sites are in proximity to the proposed WBV14e.2

access road alongside the JPDD Canal-C, and no properties within one mile of the project area are listed on the National Register of Historic Places (NRHP) and no significant standing structures have been recorded near the area.

In letters sent to the State Historic Preservation Officer (SHPO) and Indian Tribes dated 7 July 2008, the CEMVN provided project documentation, evaluated cultural resources potential in the project area, and found that the proposed IER12 actions would have no impact on cultural resources. The SHPO and the Seminole Tribe of Florida concurred with our "no historic properties affected" finding in a letter dated 1 August 2008, and an email dated 8 July 2008, respectively. No other Indian Tribes responded to our request for comments.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. No cultural resources would be impacted by the No Action alternative.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

Based on the review of state records and previous cultural resources studies, implementation of the proposed action would have no direct impact on cultural resources. CEMVN concluded no impacts to cultural resources in a letter dated November 8, 2010. The State Historic Preservation Office agreed with this conclusion in an email dated December 8, 2010. The Alabama Coushatta Tribe of Texas and the Choctaw Nation of Oklahoma agreed with this conclusion in letters dated November 30, 2010 and December 6, 2010, respectively. No other Indian Tribes responded to our request for comment.

3.2.7 Recreational Resources

Existing Conditions

A master plan for Parc des Familles has been completed and construction has begun for the main recreational resource in the vicinity of the proposed access road. (Figure 7) Parc des Familles would be the largest park in Jefferson Parish and the second-largest park in the New Orleans area, trailing only New Orleans City Park. Work on the Parc des Familles facility is expected to take two decades before it is finally finished. The park is located adjacent to and to the south of the proposed access road.

The Army Corps of Engineers issued permits in 2006 for clearing, filling and building on 20 acres of the land. This includes 15 acres for a reception hall that would overlook a lake and botanical garden. The hall would house a 17,000-square-foot banquet facility; construction of the banquet facility is scheduled to start in the near future. An additional five acres were donated to the Jefferson Parish Sheriff's Office, which plans to build a JPSO substation there. Work on the substation began in the latter part of 2010. Another 20 acres of the park have been donated to the Jefferson Parish public school system for a new high school, though construction is still several years away. The park's facilities include Estelle Playground, a maintenance facility, BMX bicycle course, equestrian center, stadium, science and art museum and other features. Part of the playground is under construction, which includes four new baseball diamonds. A gymnasium is located at the site just south of the proposed access road. The nature area is a 31-acre tract further south from the proposed access road that will remain undeveloped. It includes a pavilion, restrooms and a boardwalk trail through the tract.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, there would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding. Indirect impacts to recreational resources from the no action alternative are expected to be minimal and include minor transportation access issues for those using the gymnasium at Estelle playground.

No direct or cumulative impacts to recreational resources would be likely.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more but staying within existing ROW) to the protected side would be sufficient to prevent encroachment into the nearby Bayou aux Carpes 404(c) area. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

There would be direct impacts to recreational resources related to the proximity of the proposed access road to the Parc des Familles facility, including noise and dust from use of the road for hauling activities. These impacts are expected to be minor and temporary occurring while construction of the 100-year level of protection levees continues.

No indirect impacts would be likely for the proposed action.

Implementation of the proposed action would have beneficial cumulative impacts on recreational resources throughout the greater New Orleans metropolitan area. This proposed action is part of the ongoing Federal effort to reduce the threat to property posed by flooding. The combined effects from construction of the multiple projects underway and planned for the Lake Pontchartrain and Vicinity and the West Bank

and Vicinity Hurricane Protection Systems reduce flood risk and storm damage to hundreds of recreation facilities and associated infrastructure and parks. On the other hand, construction of the HSDRRS could have cumulative adverse impacts on recreation infrastructure by impeding use of land for recreation or by removal of recreational structures such as volleyball courts, picnic tables, and shelters. Additionally, some proposed actions could also affect fisheries, which would impact recreational fishing opportunities.



Figure 8: Proposed Parc des Familles Recreational Area

3.2.8 Noise

Existing Conditions

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dBA). Sound on the decibel scale is referred to as the sound level. The threshold of discomfort or pain is around 120 dBA.

Noise levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise metric recommended by the USEPA and has been adopted by most Federal agencies (USEPA, 1974). A DNL of 65 dBA is the level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like construction. Areas consistently exposed to a DNL above 65 dBA are generally not considered suitable for residential use. A DNL of 55 dBA was identified by USEPA as a level below which there is no adverse impact (USEPA, 1974).

Noise ranging from about 10 dBA for the rustling of leaves to as much as 115 dBA (the upper limit for unprotected hearing exposure established by the Occupational Safety and Health Administration) is common in areas where there are sources of industrial operations, construction activities, and vehicular traffic.

Residential subdivisions are located on the west side of LA HWY 3134, within two tenths of a mile of the project area.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be temporary direct impacts to noise through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. Cumulative impacts from the construction of WBV HSDRRS projects would occur. Noise from increased traffic, and other construction activities would be temporary in nature. The details of these impacts are described in IER #12, Section 3.2.9, Noise.

Under the No Action alternative, there would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 levee reach would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing would be constructed within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

Residential subdivisions are located on the west side of LA HWY 3134, within two tenths of a mile of the project area. Residents in these areas could experience direct impacts from an elevated level of noise due to the proposed road construction with elevated noise levels from motors and heavy equipment. However, these impacts are expected to be minimal and constrained to construction hours.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

With implementation of the proposed action for WBV 14e.2 Levee Reaches, there would be an elevation of noise in the vicinity of the project area. The noise would be associated with construction equipment such as bulldozers, excavators, haul trucks, and/or chainsaws working on the construction of the access road.

Using data from the Federal Highway Administration, (FHWA), Table 3 provides a listing of noise generating equipment typically used for construction of levees and floodwalls (although not all equipment types may be used in the construction of the proposed action) and Table 4 provides a comparison chart of common sounds and their associated decibel levels. Residents in the subdivisions located adjacent to the proposed construction could expect to experience noise levels that fall between the 500 foot and 1000 foot level, depending on each home's distance from the project area.

Table 3: FHWA noise levels at distance from the source (dBA)

Noise Generator	50 ft*	100 ft*	200 ft*	500 ft*	1000 ft*
Dump Truck	76	70	64	56	50
Backhoe	78	72	68	58	52
Front End Loader	79	73	67	59	53
Concrete Mixer	79	73	67	59	53
Crane	81	75	69	61	55
Bull Dozer	82	76	70	62	56
Auger Drill	84	78	72	64	58
Pile Driver	91	85	79	71	65

* Distance from receptor.

Source: FHWA 2007. The decibels (dBA) at 50 ft are measured; the others are model estimates.

Table 4: Common Sounds and their Decibel Levels

dB	Sound	dB	Sound
0	Softest sound a person can hear	95-110	Motorcycle
60	Normal conversation	110	Shouting in ear
70	Freeway traffic	110	Leaf blower
80	Ringing telephone	110	Car horn
85	Heavy traffic	117	Football game (stadium)
85	City traffic inside car	130	Stock car races
90	Truck	150	Firecracker
90	Shouted conversation	170	Shotgun
90	Train whistle at 500 ft	194	Loudest sound that can occur

Source: FHWA 2007. The decibels (dBA) at 50 ft are measured; the others are model estimates.

3.2.9 Air Quality

Existing Conditions

As of 15 June 2005, the 1-hour ozone standard for the Greater New Orleans area (Orleans, Jefferson, St. Bernard, Plaquemines, and St. Charles Parishes) was revoked and replaced by an 8-hour standard. The New Orleans area is currently not subject to any conformity requirements of the Clean Air Act. In other words, these parishes are now in attainment of the 8-hour ozone standard and all other criteria pollutant National Ambient Air Quality Standards (NAAQS). The parishes listed previously are currently in attainment of all NAAQS. This classification is the result of area-wide air quality modeling studies.

Air quality throughout the project area is good, due to the rural nature of most of the area.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be temporary direct impacts to air quality through the No Action alternative. Temporary increases in air pollution would occur from the use of construction equipment and vehicles including: haul trucks, bull dozers, cranes, and excavators. Construction could temporarily be a source of fugitive dust including 10 and 2.5 micron particulate matter (PM). Local weather patterns and mandatory dust controls implemented during construction would determine the extent of this temporary condition. Construction equipment and vehicles could generate NO₂, CO, O₃, and SO₂ from combustion in diesel engines. Long term, no change would be expected to air quality. Regional air quality standards would not be violated. The proposed project would be in conformance with NAAQS.

Under the No Action alternative, there would be no road construction or rip rap placement related impacts to air quality. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was

determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal and the air quality impacts associated with filling in the V-Line Levee Canal and excavating the new canal would be avoided. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

The placement of the rip rap in the canal would be expected to result in minor temporary impacts to air quality caused by construction and fugitive dust during the construction period. Overall, the impacts to air quality under the proposed action alternative would be similar to those described under the No Action alternative. No permanent direct or indirect impacts to air quality are expected to occur.

3.2.10 Water Quality

Existing Conditions

Louisiana Department of Environmental Quality (LDEQ) regulates both point and nonpoint source pollution. The study area includes water quality resources such as wet bottomland hardwoods, cypress-tupelo swamps, an existing canal on the protected side of the existing levee, the JPDD Canal-C, and borrow sites on the protected side of the existing Hero Canal levee. Area wetlands, including wet bottomland hardwoods and cypress-tupelo swamps, perform important water quality functions by removing and/or transforming nutrients, such as nitrogen and

phosphorus. The mechanisms by which wetlands perform this function include the storage of nutrients within the sediment or plant material, the transformation of inorganic nutrients to their organic forms, and strategic transformation and subsequent removal of nitrogen as a gas.

The ability of wetland vascular plants to remove nutrients from water and sediments during the growing season and release them later when light or temperatures do not support profuse algae growth is a general phenomenon, and important in maintaining water quality in adjoining systems.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

There would be permanent direct impacts to water quality resulting from the No Action alternative. Details of this impact can be found in IER #12, Section 3.2.10, Water Quality.

Proposed Action

Under the proposed action, the WBV 14e.2 Levee Reaches would be enlarged to reach the 100-year level of risk reduction with an ultimate design elevation of approximately 14 feet. The design may include additional overbuild material as needed to allow for settlement to reach the proposed elevation. Instead of shifting the centerline of the existing levee 58 feet, as originally discussed in IER #12, it was determined that a centerline shift of 0-30 feet (or possibly more) to the protected side would be sufficient. All work on the levee would be conducted within the existing ROW.

To access the levee reaches, the USACE Contractor would construct an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal. The road would extend from LA HWY 3134 to the V-Line Levee Canal and be approximately 1 mile in length. An 8-foot wide by 15-foot long temporary truck washdown rack would be constructed at the access road/LA HWY 3134 intersection to help reduce the amount of mud transported onto the paved highway. To help ensure waste material does not enter the canal, a retention barrier would be constructed using either hay bales, an earthen embankment, or similar material, to collect any waste material from the tires of the construction vehicles. Upon completion of the project, the wash

rack would be removed and the area returned to preconstruction status, with the exception of the improved road, which would remain in place for use by the JPDD.

A modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, would be constructed across the V-Line Levee Canal to allow the Contactor to cross the canal and access the WBV 14e.2 project site. The floating bridge could be removed or turned sideward and anchored in an emergency to allow for an increased water flow, if necessary.

Under the newly proposed action, there would be no need to realign the existing V-Line Levee Canal and the impacts to water quality associated with filling in the existing V-Line Levee Canal and dredging the new canal would be avoided. For added stability, approximately 8,000 tons of riprap would be placed along the east bankline of Reach 3B of the V-Line Levee Canal within the WBV 14e.2 project site. Within this reach the riprap placement would be approximately 850-feet in length and 55-feet in width from top of canal bank to the bottom of the canal. Graded stone shall be in pieces weighing not less than 6 pounds each, nor more than 200 pounds each. Access to the rock placement site would be via the protected side of the existing levee berm. The riprap would be offloaded from dump trucks and stockpiled on the levee berm for placement by the backhoe along the canal bank line.

The placement of rip rap along the east bankline of Reach 3B of the V-Line Levee Canal would have direct, temporary impacts to water quality in the area which would result in localized, temporary turbidity impacts. Release of sediment into the water column as part of these activities could temporarily decrease oxygen levels in the waters immediately surrounding the construction site by inhibiting photosynthesis or promoting solar heating. Also, some particles could contain chemically reduced substances (e.g., sulfides), which have a high chemical oxygen demand (COD), while other particles may have microorganisms attached, which could decompose organic matter and create a biological oxygen demand (BOD). Thus, a localized and temporary reduction in dissolved oxygen could occur in the immediate area of discharge. Oxygen levels would be expected to return to normal soon after construction.

Because the CWA Section 404(c) authority specifically relates to “unacceptable adverse effects on municipal water supplies, shellfish beds, and fishery areas”, it is important to state that these resources do not exist alongside the JPDD Canal-C servitude and would not be adversely impacted by implementation of the proposed action.

Water quality in construction areas would be managed utilizing BMPs to the maximum extent practicable.

3.2.11 Aesthetic (Visual) Resources

Existing Conditions

This resource is institutionally important because of the laws and policies that affect visual resources, most notably the 1969 National Environmental Policy Act. Visual resources are publicly and technically important because of the high value placed on the preservation of unique natural and culture landscapes.

The project site is located south of New Orleans, just outside the metro area, near the community of Estelle. The area around the proposed access road has limited development. Medium density residential is the predominant developed land use, with vacant and agricultural being the predominant undeveloped uses. The medium density residential development is located to the west, across State Highway 3134, from the project site. Natural vegetation and landscape features work to screen the residential development to the west, from activities occurring on the eastern side of Highway 3134. The predominant landscape features of the area include forest and levee. The area appears to have relatively flat terrain with little change in elevation. Thick forestation creates excellent natural habitat for wildlife and screening from human development.

There are numerous water features around the project area, but all of them occur at points that shouldn't be affected by the proposed work. There do not appear to be any state or nationally recognized scenic streams or bayous in or around the project area.

Access to the site is provided by State Highway 3134, which is a four lane primary thoroughfare. State Highway 45 also traverses the area, but is well outside of the project site, and should not be affected. Other thoroughfares include local and neighborhood streets which are also well outside the project area and should not be affected. There are no state or nationally recognized scenic byways traversing the project area.

Discussion of Direct, Indirect and Cumulative Impacts

No Action

Under the no action alternative, no direct, indirect or cumulative impacts to aesthetic (visual) resources would occur at the proposed project area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and no access road would be built and aesthetic (visual) resources would evolve from existing conditions in a natural process over the course of time.

Proposed Action

Given that the proposed access road would fall within the right of way of the existing JPDD Canal-C, and run parallel to it, there would be no direct impacts to aesthetic (visual) resources in the area. The proposed pontoon style bridge would be far enough removed from the public view shed that it likewise would not bring any direct

impacts to aesthetic (visual) resources. However, the visual resources of the project corridor would be temporarily impacted by construction activities related to implementing the proposed action and by transport activities needed to move equipment and materials to and from the site.

Typically, the creation of artificial, manmade features could decrease the natural, scenic quality in the area. In the case of the proposed action, given its removal from the public eye and its inclusion in the JPDD Canal-C ROW, this would not be the case here.

With the implementation of the proposed action, and due to its low public visibility, there are no foreseeable indirect impacts to aesthetic (visual) resources.

Cumulative impacts of the proposed action, in this instance, include the incremental impacts to aesthetic (visual) resources (not only in the project area, but to the hydrologic basin, LA and the US) resulting from the past, present and reasonably foreseeable future impacts associated with conversion of natural lands into paved and/or compacted roads or other similar surfaces. Therefore cumulative impacts would also include impacts to aesthetics due to the number of acres of natural lands in the project area and other areas throughout the basin, LA and the nation being converted to roads or other similar surfaces.

3.3 SOCIOECONOMIC RESOURCES

The focus of this section is to evaluate the relative socioeconomic impacts, if any, of construction activities associated with the proposed project revisions to the original IER #12 GIWW, Harvey and Algiers Levees and Floodwalls project area. The proposed actions for IERS 12.a consists of constructing an access road alongside the JPDD Canal-C and a pontoon bridge across the V-Line Levee Canal to allow the Contractor to cross the canal and access the WBV 14e.2 project site. In addition to examining the socioeconomic impacts of construction activities related to the actions proposed in IESR 12.a, this section also addresses the socioeconomic impacts of the 'No Action' alternative.

Existing Conditions

The area of the proposed action described in this report is located in Jefferson Parish, Louisiana. There is one census block that would potentially be impacted by the proposed actions in IERS 12.a: Block 4, located in group 1, census tract 278.12. This area is bounded to the north by the town of Woodmere, to the west by LA HWY 3134, to the east by the GIWW, and to the south by the town of Lafitte. The area is comprised of an extensive marsh system that provides a barrier between residences and the project study area. According to U.S. Census data, there were 0 housing units in 2000 located in this area and a total population of 0 (U.S. Bureau of the Census, 2000).

3.3.1 Displacement of Population and Housing

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to population and housing through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

There would be no displacement of population or housing under the No Action alternative. However, since this alternative would delay to provide 100-year level of risk reduction, the actual and perceived risks to these resources under this alternative would be higher than under the proposed action.

Proposed Action

Under the proposed action, construction of the access road and the pontoon style bridge would not occur in areas that are currently populated and therefore no direct or indirect impacts that could cause displacement of population and housing are expected to occur.

Positive cumulative impacts to population and housing associated with completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may enhance the desirability of living within the protected areas. As a result, a shift in the dispersion of population within the New Orleans Metropolitan Statistical Area (MSA), or beyond, may occur. Also, to the extent that the completion of the HSDRRS encourages regional economic growth, any additional jobs thus created may manifest itself in either in-migration to the area or an increase in commuting activity.

3.3.2 Impacts to Employment, Business and Industry

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to business and industrial activities through CEMVN actions at the proposed WBV 14e.2 Levee

Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

There would be no impacts to employment, businesses or industrial activity under the No Action alternative. However, since this alternative would delay to provide 100-year level of risk reduction, the actual and perceived risks to these resources under this alternative would be higher than under the proposed action.

Proposed Action

Under the proposed action, construction of the access road and pontoon style bridge would not occur in areas that currently engage in business activities and therefore no direct or indirect impacts that could cause impacts to businesses are expected to occur.

Under the proposed action, cumulative indirect impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may have the effect of spurring additional economic growth in the region than would otherwise occur. As a result, an increase in the number of firms and the output of business and industry would likely manifest itself in such growth.

3.3.3 Availability of Public Facilities and Services

Existing Conditions

Existing public facilities and services in the project area include the facilities in the Parc des Familles area discussed in Section 3.2.7 Recreational Resources.

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to public facilities and services through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be no impacts to public facilities and services under the No Action alternative. However, since this alternative would delay providing the 100-year level of risk reduction, the actual and perceived risks to these resources under this alternative would be higher than under the proposed action.

Proposed Action

Under the proposed action, construction of the access road and pontoon style bridge would not occur in areas that currently have public facilities and therefore no direct or indirect impacts to public facilities and services are expected to occur.

Cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may enhance the desirability of living within the protected areas. As a result, a shift in the dispersion of population within the New Orleans metropolitan statistical area, or beyond, may occur. Also, to the extent that the completion of the HSDRRS encourages regional economic growth, any additional jobs thus created may manifest itself in either in-migration to the area or an increase in commuting activities. An increase in the demand for public facilities and services would follow the migration patterns of residents and workers in the region.

3.3.4 Effects on Transportation

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to transportation through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction during which time the area would experience a continued risk of levee failures and flooding.

Proposed Action

Under the proposed action, construction of the access road alongside the JPDD Canal-C and the pontoon bridge across the V-Line Levee Canal would provide the Contractor access to the WBV 14e.2 levee reach and help to ensure the rapid completion of the HSDRRS. The proposed action would reduce traffic congestion along LA HWY 3134 due to the ongoing construction of the HSDRRS project features and lane closures in the vicinity of the project.

Under the proposed action alternative, cumulative indirect impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may have the effect of spurring additional economic growth in the region than would otherwise occur. An increase in the demand for transportation resources usually follows gains in economic activity and would thus be expected given any additional economic growth in the region.

3.3.5 Disruption of Community and Regional Growth

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to community and regional growth through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 levee reach would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be no direct or indirect impacts to community and regional growth under the No Action alternative.

Proposed Action

Under the proposed action, no adverse, direct or indirect impacts to community and regional growth are expected to occur. The proposed project would advance the growth of communities within the HSDRRS by reducing their flood risk. Without strong storm and flood protection, a community's growth would necessarily be limited. The limitation in growth is primarily caused by the inability to certify the levee system such that the protected area could comply with the requirements of the National Flood Insurance Program (NFIP), and consequently would face higher flood risk and insurance premiums. Although improvements to flood and hurricane protection would not fully eliminate the threat of storm damages in the future, by advancing the HSDRRS, confidence and investment in the greater New Orleans community would increase. Since this alternative would provide the most rapid flood risk reduction, it would most likely have the greatest effect in increasing community growth.

3.3.6 Impacts to Tax Revenues and Property Values

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to tax revenues and property values through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

Under the No Action alternative, there would be no direct or indirect impacts to tax revenues and property values proximate to the proposed project.

Proposed Action

Under the proposed action, construction of the access road and pontoon style bridge would occur in areas that currently have properties located within one mile of the proposed project; however no direct or indirect impacts to tax revenues or property values are expected to occur.

Cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may have the effect of spurring additional economic growth in the region than would otherwise occur. It follows that increases in tax revenues would ensue given additional economic growth. In addition, the lower incidence of flooding that the HSDRRS is designed to achieve would have the effect of preserving, if not enhancing, property values within the protected areas.

3.3.7 Changes in Community Cohesion

Discussion of Direct, Indirect, and Cumulative Impacts

No Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented and there would be no direct or indirect impacts to community cohesion through CEMVN actions at the proposed WBV 14e.2 Levee Reaches and the V-Line Levee Canal area. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN. Access to the WBV 14e.2 Levee Reaches would be impacted by the ongoing construction and lane closures in the vicinity of the project, delaying the completion of the 100-year level of risk reduction and the area would experience a continued risk of levee failures and flooding.

There would be no direct or indirect impacts to community cohesion under the No Action alternative. However, under these conditions, the actual and perceived risks to the community would continue until the completion of the HSDRRS.

Proposed Action

Under the proposed action, no direct or indirect effects on community cohesion are expected to occur. Increased protection from flooding would preserve and enhance the potential for community cohesion.

Under the proposed action alternative, cumulative indirect impacts associated with a more rapid completion of the HSDRRS in its entirety may occur. The lower flood risk that occurs through much of the New Orleans metropolitan area upon completion of the HSDRRS may have the effect of enhancing community cohesion. The reason for this is that the lower incidence of flooding reduces the likelihood that patterns of social interaction and communication within the community are interrupted or permanently altered.

3.4 ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) is institutionally significant because of Executive Order 12898 of 1994 (E.O. 12898) and the Department of Defense's Strategy on Environmental Justice of 1995, which direct Federal agencies to identify and address any disproportionately high adverse human health or environmental effects of Federal actions to minority and/or low-income populations. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, and Pacific Islander. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population. Low-income populations as of 2000 are those whose income is \$22,050.00 for a family of four and are identified using the Census Bureau's statistical poverty threshold. The Census Bureau defines a "poverty area" as a Census tract with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level. This is updated annually at <http://aspe.hhs.gov/poverty/09poverty.shtml>.

This resource is technically significant because the social and economic welfare of minority and low-income populations may be positively or disproportionately impacted by the proposed actions. This resource is publicly significant because of public concerns about the fair and equitable treatment (fair treatment and meaningful involvement) of all people with respect to environmental and human health consequences of federal laws, regulations, policies, and actions.

A potential disproportionate impact may occur when the percent minority (50 percent) and/or percent low-income (20 percent) population in an EJ study area are greater than those in the reference community. For purposes of this analysis, all Census Block Groups within a one mile radius of the project footprint are defined as the EJ study area.

The HSDRRS project, of which this IER Supplemental study area is a subset, is considered the reference community of comparison, whose population is therefore considered the EJ reference population for comparison purposes. Parish figures were used for unincorporated areas located within one mile of the proposed project footprint.

The methodology, consistent with E.O. 12898, to accomplish this Environmental Justice analysis includes, identifying low-income and minority populations within the proposed borrow project area using up-to-date economic statistics, aerial photographs, 2000 U.S. Census records, Environmental Systems Research Institute, Inc. (ESRI) estimates, as well as conducting community outreach activities such as public meetings. Despite the 2000 U.S. Census being nine years old, it serves as a logical baseline of information and is the primary deciding variable per data accuracy and reliability for the following reasons:

- Census 2000 data is the most accurate source of data available due to the sample size of the Census decennial surveys. With one of every six households surveyed, the margin of error is negligible.
- The Census reports data at a much smaller geographic level than other survey sources, providing a more defined and versatile option for data reporting.
- Census information sheds light upon the demographic and economic framework of the area pre-Hurricane Katrina. By accounting for the absent population, the analysis does not exclude potentially low income and minority families that wish to return home.

Due to the considerable impact of Hurricane Katrina upon the New Orleans metropolitan area, and the likely shift in demographics and income, the 2000 Census data are supplemented with more current data, including 2007 and 2008 estimates provided by ESRI. The 2007 and 2008 estimates are utilized for reference purposes only to show changing trends in population since 2000.

Historic Conditions

The concept of “environmental justice” is rooted in Title VI of the Civil Rights Act of 1964, which prohibited discrimination based on race, color and national origin, and other nondiscrimination statutes as well as other statutes including the National Environmental Policy Act of 1969, the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970, and 23 U.S.C Section 109 (h). In 1971, the Council on Environmental Quality’s (CEQ) annual report acknowledged racial discrimination adversely affects the environment of the urban poor. During the next ten years, activists maintained that toxic waste sites were disproportionately located in low-income and areas populated by “people of color.” By the early 1980s, the environmental justice movement had increased its visibility and broadened its support base (Commission for Environmental Equality 2009).

This led to the United Church of Christ (UCC) undertaking a nationwide study and publishing *Toxic Waste and Race in the United States* (UCC 1987). This eventually gained the attention of the federal government and in 1992 the U.S. Environmental Protection Agency's (EPA's) Office of Environmental Equity was established. In 1994, EJ was institutionalized within the federal government through Executive Order 12898 (EPA 1995a), which focused federal attention on human-health and environmental conditions in minority and low-income communities (EPA 1995a, 1995b, 1995c, 1995d). Executive Order 12898 requires greater public participation and access to environmental information in affected communities. The results of early efforts and research (UCC 1987) into EJ suggested that environmental amenities and toxic waste sites were not uniformly distributed among income groups, classes, or ethnic communities. Disparities of this nature may have been and continue to be the result of historical circumstances, lack of community participation, or simply inadequate or inappropriate oversight. Consequently, dialogue with some community groups were not conducted and their concerns not considered in the decision making process on local or federal actions.

Existing Conditions

According to the 2000 U.S. Census, and per requirements of Executive Order 12898 (E.O. 12898), it has been determined that the IER #12 WBV 14e.2 Access Road and V-Line Levee Canal area is not a minority community at 32.1 percent minority population and not a low-income area with 13.8 percent of its population below the poverty level. It is unlikely that the IER #12 WBV 14e.2 Access Road and V-Line Levee Canal disposal area is an EJ area of concern.

Discussion of Direct, Indirect and Cumulative Impacts

No-Action

Under the No Action alternative, the Government-approved actions for the WBV 14e.2 Levee Reaches and the V-Line Levee Canal, as described in IER #12, would be implemented. There would be no rip rap placed in Reach B of the V-Line Levee Canal and the access road alongside the JPDD Canal-C would not be constructed by the CEMVN.

There would be no impacts to any minority and/or low-income communities as no minority and/or low-income communities have been identified in the study area. The WBV 14e.2 Levee Reaches, the V-Line Levee Canal and the JPDD Canal-C are located on uninhabited land. No minority and/or low income community is located within 1 mile of this section. Construction in this section would require additional right-of-way on the protected side, which would mean taking of property. This taking would occur in 'unpopulated' area per Census data, therefore, no disproportionately high or adverse human health or environmental effects on minority or low-income populations would occur.

Proposed Action

Under the proposed action, there would be no impacts to any minority and/or low-income communities as no minority and/or low-income communities have been identified in the study area. Therefore, no disproportionately high or adverse human health or environmental effects on minority or low-income populations would occur.

3.5 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

Under 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 the CEMVN 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.

The other portions of the project area were investigated in conjunction with IER #12 and these reports are available on www.nolaenvironmental.gov.

An ASTM E 1527-05 Phase I ESA for the proposed project area, entitled “WBV-14e.2: V-Line Levee East of Vertex, Alternate Access Route, Jefferson Parish, Louisiana” was completed on 22 December 2010 by USACE-MVN-PDR-RP. A copy of the Phase I ESA will be maintained on file at the CEMVN office in New Orleans, and is incorporated herein by reference. Copies of the report are available by requesting them from the CEMVN, or accessing them at www.nolaenvironmental.gov.

Personnel from USACE-MVN-PDR-RP made a field inspection on 13 December 2010 of the proposed alternate access route. The site was inspected for the presence of pipes, containers, tanks or drums, ponds or lagoons, car bodies, tires, refrigerators, trash dumps, electrical equipment, oil drilling equipment, gas or oil wells, discoloration of vegetation or water sheens, discoloration of soils, out-of-place dirt mounds or depressions in the landscape, evidence of fire, stressed soils with lack of vegetation, discoloration of vegetation, animal remains, unusual animal behavior, biota indicative of a disturbed environment, and odors indicative of poor water quality or chemical presence.

No evidence of Recognized Environmental Conditions (RECs) or HTRW issues that would affect the proposed project, personnel working on the project, or the public at large was noted during the site visit. A review of government environmental databases, historical aerial photographs, and historical topographical maps also did not reveal any evidence of RECs that would affect the proposed project.

The objective of the Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible pursuant to the process described herein, RECs in connection with a given

property. This assessment revealed no evidence of RECs in connection with the project site. No additional HTRW investigation is recommended. If the project area or methods change the HTRW status may need to be re-evaluated.

4. CUMULATIVE IMPACTS

NEPA requires a Federal agency to consider not only the direct and indirect impacts of a proposed action, but also the cumulative impacts of the action. A 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.

In addition to this IER Supplemental, the CEMVN is preparing a draft Comprehensive Environmental Documents (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.

At the time of the approval of the Decision Record for IER #12, 18 February 2009, 100% of the project design was not complete and the full extent of potential impacts on transportation were unknown. It was understood that large quantities of construction materials would be delivered to the project area, as well as to other ongoing 100-year level of risk reduction projects in the Greater New Orleans area. Since the 2009 approval of IER #12, a report titled “Transportation Report for the Construction of the 100- year Hurricane and Storm Damage Risk Reduction System” was released in March, 2010 and is available on www.nolaenvironmental.gov.

There would be no adverse cumulative impacts on minority and/or low-income communities, as no such communities have been identified within the study area per 2000 U.S. Census information and requirements of E.O. 12898. Rather, the proposed action would contribute toward achieving and sustaining a coastal ecosystem that would support and protect the environment, local economy and culture of the region. Positive cumulative effects of implementing the proposed action would be the temporary expansion of the local economy by construction-related activities.

Table 5 shows the cumulative compensatory mitigation that would be completed by the CEMVN. This table will be updated as potential impacts are assessed in forthcoming IERs. Cumulative impacts for the actions considered in all of the IERs will be incorporated into the CED.

Table 5: HSDRRS Impacts and Compensatory Mitigation to be Completed

IER	Parish	Side	Non-wet BLH	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>
1 LaBranche Levee	St. Charles	Protected	-	-	-	-	137.50	73.99	-	-	-
		Flood	-	-	11.33	8.09	143.57	110.97	-	-	
1 Supp. LaBranche Levee	St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	
2 West Return Floodwall	St. Charles, Jefferson	Protected	-	-	-	-	-	-	-	-	75.00
		Flood	-	-	-	-	-	-	17.00	9.00	
3 Jefferson Lakefront	Jefferson	Protected	-	-	-	-	-	-	-	-	26.40
		Flood	-	-	-	-	-	-	-	-	
4 Orleans Lakefront	Orleans	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	
5 Lakefront Pump Stations	Jefferson, Orleans	Protected	-	-	-	-	-	-	-	-	3.20
		Flood	-	-	-	-	-	-	-	-	
6 Citrus Lands Levee	Orleans	Protected	-	-	-	-	-	-	-	-	6.90
		Flood	-	-	-	-	-	-	0.00	-	
7 Lakefront Levee	Orleans	Protected	-	-	151.70	79.30	-	-	100.40	36.80	106.00
		Flood	-	-	30.00	11.90	-	-	70.00	37.20	
7 Supplemental Lakefront Levee	Orleans	Protected	-	-	17.30	9.90	-	-	18.60	6.10	-
		Flood	-	-	2.80	0.30	-	-	56.00	29.80	
8 Bayou Bienvenue/Dup	St. Bernard	Protected	-	-	-	-	-	-	-	-	0.30
		Flood	-	-	-	-	-	-	-	-	
9 Caenarvon Floodwall	St. Bernard	Protected	-	-	-	-	-	-	-	-	-
		Flood	10.00	4.65	1.16	0.66	-	-	1.90	1.20	
10 Chalmette Loop	St. Bernard	Protected	-	-	38.32	16.44	-	-	106.55	57.31	95.00
		Flood	-	-	35.31	15.22	-	-	323.04	209.94	
11 Tier 2 Borgne IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	15.00	2.59	-	-	122.00	24.33	

IER	Parish	Side	Non-wet BLH	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>
11 Tier 2 Pontchartrain IHNC	Orleans, St. Bernard	Protected	-	-	-	-	-	-	-	-	7.00
		Flood	-	-	-	-	-	-	-	-	
12 GIWW, Harvey, Algiers	Jefferson, Orleans, Plaquemines	Protected	-	-	251.70	177.3	-	-	-	-	-
		Flood	-	-	2.30	1.90	74.90	38.50	-	-	
13 Hero Canal, East. Terminus	Plaquemines	Protected	-	-	13.00	7.80	-	-	-	-	-
		Flood	-	-	19.00	10.59	39.00	28.87	-	-	
14 Westwego to Harvey Levee	Jefferson	Protected	-	-	45.00	30.00	-	-	-	-	-
		Flood	-	-	45.50	18.58	29.75	17.02	-	-	
14 Supp. Westwego to Harvey Levee	Jefferson	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	42.00	24.00	-	-	
15 Lake Cataouatche	Jefferson	Protected	-	-	23.50	6.13	-	-	-	-	-
		Flood	-	-	3.60	1.35	-	-	-	-	
16 Western Tie-in	Jefferson, St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	137.80	66.30	
16 Supplemental Western Tie-in	Jefferson, St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	79.10	37.26	-	-	-	-	
17 Company Canal	Jefferson	Protected	-	-	5.50	2.69	-	-	-	-	-
		Flood	-	-	-	-	19.00	17.09	-	-	
18 GFBM	Jefferson, Orleans, Plaquemines, St. Bernard, St.	Protected	379.30	152.32	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	
19 CFBM	Hancock County, MS; Iberville, Jefferson, Orleans, Plaquemines, St. Bernard	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	
22 GFBM	Jefferson, Plaquemines	Protected	244.69	118.54	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	

IER	Parish	Side	Non-wet BLH	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>
23 CFBM	Hancock County, MS; Plaquemines, St. Bernard, St. Charles	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
25 GFBM	Jefferson, Orleans, Plaquemines	Protected	933.00	284.00	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
26 CFBM	Jefferson, Plaquemines, St. John the Baptist; Hancock, MS	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
27 Lakefront Pump Stations	Orleans	Protected	-	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
28 GFBM	Jefferson, Plaquemines, St. Bernard	Protected	19.94	8.45	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
29 CFBM	Orleans, St. Tammany, St. John the Baptist	Protected	107.30	48.60	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
30 CFBM	St. Bernard and St. James; Hancock, MS	Protected	225.00	189.40	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
31 CFBM	E.Baton Rouge, Jeff, Lafourche, Plaquem, St. Bern, St. Tam; Hancock, MS	Protected	965.3	-	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
32 CFBM	Ascension, Plaquemines, St. Charles	Protected	202.10	97.43	-	-	-	-	-	-	-
		Flood	-	-	-	-	-	-	-	-	-
Totals		Protected	3086.63	708.32	545.52	329.22	137.50	73.99	225.55	100.21	00.00
		Flood	10.00	4.65	323.80	163.33	350.02	237.30	740.54	388.42	230.99
		Both	3096.63	712.97	869.32	492.55	487.52	311.29	966.09	488.63	230.99

- Not applicable to the IER or number impacted is 0
GFBM: Government Furnished Borrow Material
CFBM: Contractor Furnished Borrow Material

5. SELECTION RATIONALE

The modifications proposed in this IER Supplemental were developed in order to provide an alternative point of access to the WBV 14e.2 project area and to avoid shifting the V-Line levee canal and the BLH and other impacts associated with such a shift. After IER #12 was completed, the JPDD servitude next to the Canal-C drainage canal was proposed as an alternative access point in order to ensure construction on the WBV 14e.2 levee reach would not be impacted by traffic congestion and delays caused by the construction of other HSDRRS project features, delaying the completion of the 100-year level of risk reduction which would cause the area to experience a continued risk of levee failures and flooding. As such, it is environmentally preferable to the “No Action” alternative.

At the time of the approval of the Decision Record for IER #12, 18 February 2009, 100% project design was not complete and the full extent of potential impacts on transportation were unknown. It was understood that large quantities of construction materials would be delivered to the project area, as well as to other ongoing 100-year level of risk reduction projects in the Greater New Orleans area. Since the 2009 approval of IER #12, a report titled “Transportation Report for the Construction of the 100- year Hurricane and Storm Damage Risk Reduction System” was released in March, 2010 and is available on nolaenvironmental.gov.

The CEQ regulations for implementing NEPA require that the Record of Decision (ROD) for an EIS 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. The proposed action alternatives discussed herein would avoid impacts to BLH, would occur within existing ROW and are considered environmentally preferable.

6. COORDINATION AND CONSULTATION

6.1 PUBLIC INVOLVEMENT

Extensive public involvement has been sought in preparing this IER Supplemental. The projects analyzed in this IER were publicly disclosed and described in the Federal Register on 13 March 2007 and on the website www.nolaenvironmental.gov. Scoping for this project was initiated on 12 March 2007 through placing advertisements and public notices in USA Today and The New Orleans Times-Picayune. Nine public scoping meetings were held throughout the New Orleans Metropolitan area to explain the scope and process of the Alternative Arrangements for implementing NEPA between March 27 and April 12, 2007, after which a 30 day scoping period was open for public

comment submission. Additionally, the CEMVN is hosting monthly public meetings to keep the stakeholders advised of project status. The public is able to provide verbal comments during the meetings and written comments after each meeting in person, by mail, and via www.nolaenvironmental.gov.

This amended draft IER Supplemental will also be distributed for a 30-day public review and comment period. If requested, a public meeting specific to the proposed action will be held during the review period for the purpose of answering questions and concerns regarding the proposed action. Any comments received during the initial comment period, and during any additional review period, will along with comments from the public meeting will be considered part of official record. After the 30-day comment period, and public meeting if requested, the CEMVN District Commander will review all comments received during the review period and make a determination if they rise to the level of being substantive in nature. If comments are not considered to be substantive, the District Commander will make a decision on the proposed action. This decision will be documented in an IER Decision Record.

If a comment(s) is determined to be substantive in nature, an Addendum to the IER will be prepared and published for an additional 30-day public review and comment period. After the expiration of the public comment period the District Commander will make a decision on the proposed action. The decision will be documented in an IER Decision Record.

6.2 AGENCY COORDINATION

Preparation of this amended IER Supplemental 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 PDT to assist in the planning of this project and to complete a mitigation determination of the potential direct and indirect impacts of the proposed action. Monthly meetings with resource agencies were also held concerning this and other IER projects. The following agencies, as well as other interested parties, are receiving 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
- 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 CEMVN received a draft programmatic Coordination Act Report from the USFWS dated 3 January 2011. (Appendix D)

The U.S. Fish and Wildlife Service (USFWS) reviewed the proposed action to see if it would affect any threatened and endangered (T&E) species under its jurisdiction, or their critical habitat. The USFWS concurred with the CEMVN in a letter dated 3 January 2011 that the proposed action would not have adverse impacts on T&E species under its jurisdiction.

A modification to CZM consistency determination C20070509, was sent to LADNR dated 6 December 2010. The consistency determination concurrence is currently pending and should be received per LADNR before the conclusion of the Public Review period for this supplemental.

Based on the review of state records and previous cultural resources studies, implementation of the proposed action would have no direct impact on cultural resources. CEMVN concluded no impacts to cultural resources in a letter dated November 8, 2010. The State Historic Preservation Office agreed with this conclusion in an email dated December 8, 2010. The Alabama Coushatta Tribe of Texas and the Choctaw Nation of Oklahoma agreed with this conclusion in letters dated November 30, 2010 and December 6, 2010, respectively. No other Indian Tribes responded to our request for comment.

Section 106 of the National Historic Preservation Act, as amended, requires consultation with the Louisiana State Historic Preservation Officer (LASHPO) and Native American tribes. LASHPO reviewed the proposed action in IERS #12.a, including the area containing WBV 14e.2 and JPDD Canal-C, and determined that it would not adversely affect any cultural resources. Eleven federally recognized tribes that have an interest in the region were given the opportunity to review the proposed action. The SHPO agreed with this conclusion in an email dated December 8, 2010. The Alabama Coushatta Tribe of Texas and the Choctaw Nation of Oklahoma agreed with this conclusion in letters dated November 30, 2010 and December 6, 2010, respectively. No other Indian Tribes responded to our request for comment.

7. MITIGATION

Mitigation for unavoidable impacts to the human and natural environment described in this and other IERs will be addressed in separate mitigation IERs. The CEMVN has partnered with Federal and state resource agencies to form an interagency mitigation team that is working to assess and verify these impacts, and to look for potential mitigation sites in the appropriate hydrologic basin. This effort is occurring concurrently with the IER planning process in an effort to complete mitigation work and construct mitigation projects expeditiously. As with the planning process of all other IERs, the public will have the opportunity to give input about the proposed work. These mitigation IERs will, as described in section 1 of this IER, be available for a 30-day public review and comment period.

No impacts have been identified that would require compensatory mitigation.

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 HSDRRS that are being analyzed through other IERs. Mitigation planning is being carried out for groups of IERs, rather than within each IER, so that large mitigation efforts could be taken rather than several smaller efforts, increasing the relative economic and ecological benefits of the mitigation effort.

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

8. COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

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

Environmental compliance for the proposed action will be achieved upon coordination of this IER with appropriate agencies, organizations, and individuals for their review and comments; USFWS and NMFS confirmation that the proposed action would not be likely to adversely affect any T&E species, or completion of Endangered Species Act Section 7 consultation (Appendix D); LADNR concurrence with the determination that the proposed action is pending; coordination with the LASHPO; receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations (Appendix D); and receipt and acceptance or resolution of all LADEQ comments on the water quality and air quality impact analysis is pending.

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 risk reduction 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 C20070509, was sent to LADNR dated 6 December 2010. The consistency determination concurrence is currently pending and should be received per LADNR before the conclusion of the Public Review period for this supplemental.

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.

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 letter dated 3 January 2011.

Fish and Wildlife Coordination Act. The Fish and Wildlife Coordination Act (16 U.S.C. 661-666c; Act of March 10, 1934, as amended) requires that wildlife, including fish, receive equal consideration and be coordinated with other aspects of water resource development. This is accomplished by requiring consultation with the USFWS and NMFS whenever modifications are proposed to a body of water and a Federal permit or license is required. This consultation determines the possible harm to fish and wildlife resources, 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 the USFWS by letter dated 3 January 2011.

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 December 8, 2010 concludes this process.

9. CONCLUSIONS

9.1 PROPOSED DECISION

The proposed actions at the WBV 14e.2 Levee Reaches and JPDD Canal-C area consists of enlarging the WBV 14e.2 Levee Reaches to an ultimate design elevation of approximately 14 feet with a protected-side shift within existing ROW (probably between 0-30 feet, but possibly more) rather than the 58-foot shift discussed in IER #12, elimination of the shift in the V-Line levee canal proposed in IER #12, constructing an access road that may include a combination sand base and crushed stone surfacing within the 100-foot wide JPDD servitude alongside the JPDD Canal-C drainage canal, the use of a modular, shallow draft, pontoon style bridge, measuring approximately 50-feet wide by 228-feet long by 3-feet 10-inches deep, to allow the Contactor to cross the V-Line Levee Canal and access the WBV 14e.2 project site and the placement of approximately 8,000 tons of riprap along the east bankline of Reach 3B of the V-Line Levee Canal.

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

- There would be no significant environmental impacts as a result of the proposed action.

9.2 PREPARED BY

The point of contact and Environmental Manager responsible for the preparation of this IER Supplemental is Patricia S. Leroux, CEMVN. The address of the preparer 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 6 lists the preparers of the various sections and topics in this IERS.

Table 6: IER Preparers

Environmental Team Leader	Sandra Stiles, CEMVN
Environmental Manager	Patricia Leroux, CEMVN
Senior Project Manager	Julie Vignes, CEMVN
Project Manager	Jeffrey Williams, CEMVN
Review Team	Aven Bruser, CEMVN – Office of Counsel
HTRW	J. Christopher Brown, CEMVN
Cultural Resources	Paul Hughbanks, CEMVN
Recreational Resources	Andrew Perez, CEMVN
Environmental Justice	Paul Hughbanks, CEMVN
Internal Technical Review	Bret Walters, CEMVM
Internal Technical Review	Robert Dunn, CEMVM
Internal Technical Review	Christopher Koepfel, CEMVK

9.3 LITERATURE CITED

Anthony, R.G., R.L. Knight, G.T. Allen, B.R. McClelland, and J.I. Hodges. 1982. Habitat use by nesting and roosting bald eagles in the Pacific Northwest. *Trans. N. Am. Wildl. Nat. Resour. Cong.* 47:332-342.

Chavis, Jr., B. F. and Lee, C. 1987. *Toxic Wastes and Race in the United States: A National Report of the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites.* United Church of Christ Commission for Racial Justice

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

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. *The birder's handbook: A field guide to the natural history of North American birds.* Fireside Book, Simon & Schuster, Inc. New York, N.Y. 785 pp.

Harlan, D. and S. Nolan. 2007. Phase I Survey of the Proposed Westbank N Borrow Area, Plaquemines Parish, LA. Draft report prepared for the U.S. Army Corps of Engineers, New Orleans District, New Orleans, LA by Earth Search, Inc. New Orleans, LA.

USACE. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Accessed at <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>

U.S. EPA. (1995a). Environmental Justice Strategy: Executive Order 12898, #EPA/200-R-95-002 (April) 1995.

U.S. EPA. (1995b). OSWER Environmental Justice Action Agenda. *Office of Solid Waste and Emergency Response.* EPA540/R-95/057. Washington, DC: U.S. EPA
U.S. EPA. (1995c). Waste Programs Environmental Justice Accomplishments Report. *OSWER* EPA540/R-95/057. Washington, DC: U.S. EPA

U.S. EPA. (1995d). Environmental Justice 1994 Annual Report: Focusing on Environmental Protection for All People. Washington, DC: U.S. EPA.

APPENDIX A: LIST OF ACRONYMS AND DEFINITIONS OF COMMON TERMS

AG	- Algiers Gate
CED	- Comprehensive Environmental Document
CEMVN	- United States Army Corps of Engineers, Mississippi Valley Division, CEMVN
CEQ	- Council on Environmental Quality
CERCLA	- Comprehensive Environmental Response, Compensation, and Liability Act
DNL	- Day-Night Sound Level
dBA	- Decibels
EA	- Environmental Assessment
EIS	- Environmental Impact Statement
EPA	- Environmental Protection Agency
ER	- Engineer Regulation
ESA	- Environmental Site Assessment
FONSI	Finding of No Significant Impact
FPPA	- Farmland Protection Policy Act
FWCA	- Fish and Wildlife Coordination Act
GIWW	- Gulf Intracoastal Waterway
HSDRRS	- Hurricane and Storm Damage Risk Reduction System
HTRW	- Hazardous, Toxic, and Radioactive Waste
IER	- Individual Environmental Report
LA	- Louisiana

LASHPO	- Louisiana State Historic Preservation Officer
LCRP	- Louisiana Coastal Resource Program
LDEQ	- Louisiana Department of Environmental Quality
LDNR	- Louisiana Department of Natural Resources
LNHP	- Louisiana Natural Heritage Program
LORR	- Level of risk reduction
LPV	- Lake Pontchartrain Vicinity
NAAQS	- National Ambient Air Quality Standards
NEPA	- National Environmental Policy Act
NAVD 88	- North American Vertical Datum of 1988
NMFS	- National Marine Fisheries Service
PDT	- Project Delivery Team
PM	- Particulate Matter
PPA	- Project Partnering Agreement
RCRA	- Resource Conservation and Recovery Act
REC	- Recognized Environmental Conditions
ROD	- Record of Decision
ROW	- Right-of-Way
SPH	- Standard Project Hurricane
GIWW A	- Gulf Intracoastal Waterway South Gate A
WCC	- Gulf Intracoastal Waterway West Closure Complex
T&E	- Threatened and Endangered
U.S.	- Unites States of America

USACE - United States Army Corps of Engineers
USDA - United States Department of Agriculture
USFWS - United States Fish and Wildlife Service
USHUD - United States Department of Housing and Urban Development
WBV - West Bank and Vicinity of New Orleans
WRDA - Water Resources Development Act

APPENDIX B: PUBLIC COMMENT AND RESPONSES SUMMARY

Public comments and responses will be added once the 30 day public review process has been completed.

APPENDIX C: MEMBERS OF INTERAGENCY ENVIRONMENTAL TEAM

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

APPENDIX D: INTERAGENCY CORRESPONDENCE



United States Department of the Interior

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



January 3, 2011

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

Dear Colonel Fleming:

The U.S. Army Corps of Engineers (Corps) intends to prepare an Individual Environmental Report Supplemental (IERS #12.a) to evaluate potential impacts associated with proposed modifications to IER 12 titled "Gulf Intracoastal Waterway (GIWW), Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans and Plaquemines Parishes, Louisiana." That IERS is being prepared under the approval of the Council on Environmental Quality (CEQ) to obtain compliance with the National Environmental Policy Act of 1969 (83 Stat. 852, as amended; 42 U.S.C. 4321- 4347) and is authorized by Public Law 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Supplemental 4), and Public Law 110-28, U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (5th Supplemental). Those laws authorized the Corps to upgrade two existing hurricane protection projects (i.e., Westbank and Vicinity of New Orleans and Lake Pontchartrain and Vicinity) in the Greater New Orleans area in southeast Louisiana to provide 100-year hurricane protection. This draft report addresses project impacts to fish and wildlife resources.

The U.S. Fish and Wildlife Service (Service) provided a November 26, 2007, Draft Programmatic Fish and Wildlife Coordination Act (FWCA; 48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) report that addresses the hurricane protection improvements authorized in Supplemental 4; a February 18, 2009, FWCA report that addresses improved protection from Harvey to Algiers; and a September 15, 2010, draft FWCA report that addresses potential impacts associated with a proposed waterline facilitating the West Closure Complex. This letter supplements our previous reports and addresses additional proposed access points to facilitate expedited construction of the Hurricane and Storm Damage Risk Reduction System (HSDRRS) projects. This report does not constitute the report of the Secretary of the Interior as required by



Section 2(b) of the FWCA. This report has been provided to the Louisiana Department of Wildlife and Fisheries and the National Marine Fisheries Service; their comments will be incorporated into our final report.

The study area is located within Jefferson, Orleans, and Plaquemines Parishes within the Mississippi River Deltaic Plain of the Lower Mississippi River Ecosystem. Higher elevations occur on the natural levees of the Mississippi River and its distributaries. Developed lands are primarily associated with natural levees, but extensive wetlands have been leveed and drained to accommodate residential, commercial, and agricultural development. Federal, State, and local levees have been installed for flood protection purposes, often with negative effects on adjacent wetlands. The Mississippi River and the GIWW are prominent landscape features, as are extensive oil and gas industry access channels and pipeline canals. Extensive wetlands and associated shallow open waters dominate the landscape outside the flood control levees.

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

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

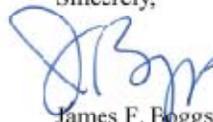
The proposed action consists of constructing an access road along the Jefferson Parish Drainage Department (JPDD) Canal-C off Louisiana Highway 3134 for haul trucks accessing the Westbank and Vicinity 14 e.2 project site. The access road would be constructed within the existing 100-foot JPDD drainage servitude. To facilitate access to the construction site a 50-foot wide by 228-foot long, modular, shallow-draft pontoon bridge is proposed across the V-line Levee Interior Drainage Canal. Additionally, approximately 8,000 tons of riprap will be placed along 850 feet of the east bankline of Reach 3B.

SERVICE POSITION AND RECOMMENDATIONS

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

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Eggs', written over the printed name.

James F. Eggs
Supervisor
Louisiana Field Office

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