

DRAFT INDIVIDUAL ENVIRONMENTAL REPORT

STOCKPILE AREAS

**ST. CHARLES AND ST. JOHN
THE BAPTIST PARISHES, LOUISIANA**

IER #24



**US Army Corps
of Engineers®**

MARCH 2010

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1. INTRODUCTION

The U.S. Army Corps of Engineers (USACE) Mississippi Valley Division, New Orleans District (CEMVN), has prepared this Individual Environmental Report #24 (IER #24) to evaluate the potential impacts associated with the possible use of the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed stockpile areas are located in southeastern Louisiana (figure 1), and would be used to temporarily store borrow material taken from the approved government-furnished borrow areas located in the Bonnet Carré Spillway in St. Charles Parish, Louisiana. The term “borrow” is used in the fields of construction and engineering to describe material that is dug in one location for use at another location. Approved government-furnished and contractor-furnished borrow areas discussed in IER #18, IER #19, IER #22, IER #23, IER #25, IER #26, IER #28, IER #29, IER #30, and IER #32 could be used for construction of the Hurricane and Storm Damage Risk Reduction System (HSDRRS). The approved government-furnished borrow areas in the Bonnet Carré Spillway are discussed in IER #18 and Supplemental Information Report (SIR) #10.

IER #24 has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality’s (CEQ) Regulations (40 CFR §1500-1508), and the USACE Engineering Regulation (ER) 200-2-2, Environmental Quality, Procedures for Implementing the NEPA. The preparation of an IER, in lieu of a traditional Environmental Assessment (EA) or Environmental Impact Statement (EIS), is provided for in ER 200-2-2 (33 CFR §230) and pursuant to the CEQ NEPA Implementation Regulations (40 CFR §1506.11).

The CEMVN implemented Alternative Arrangements on 13 March 2007, under the provisions of the Council on Environmental Quality Regulations for Implementing the NEPA (40 CFR §1506.11). The Alternative Arrangements were developed and implemented in the aftermath of Hurricanes Katrina and Rita in order to evaluate environmental impacts arising from HSDRRS projects in a timely manner, utilizing the NEPA emergency procedures found at 40 CFR 1506.11. The Alternative Arrangements were published on 13 March 2007 in 72 FR 11337, and are available for public review at www.nolaenvironmental.gov.

The Alternative Arrangements were implemented in order to expeditiously complete environmental analysis for any changes to the authorized HSDRRS, formerly known as the Hurricane Protection System (HPS), authorized and funded by Congress and the Administration. The proposed stockpile areas discussed in this IER are located in southeastern Louisiana and are part of the Federal effort to rebuild and complete construction of the HSDRRS in the New Orleans metropolitan area as a result of Hurricanes Katrina and Rita in 2005.

This draft IER will be distributed for a 30-day public review and comment period. A public meeting specific to the proposed action will be held during the review period. Any comments received during this public meeting would be considered part of the official record. After the 30-day comment period and public meeting the CEMVN District Commander will review all comments received during the review period and determine if they rise to the level of being substantive in nature. If any 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.

The CEMVN's engineers currently estimate that approximately 72,000,000 cubic yards of suitable material would be required to complete HSDRRS projects, approximately 7,000,000 cubic yards (9.7%) of which could be provided by approved government-furnished borrow areas in the Bonnet Carré Spillway. Due to the importance of providing safety to the citizens of the New Orleans metropolitan area, the CEMVN is investigating the proposed stockpile areas discussed in this IER as temporary storage areas for borrow material. During high water events that periodically flood the Spillway, borrow areas may be flooded, and the material from them would not be available for HSDRRS construction projects. Stockpiling borrow in the temporary storage areas would allow its access and use during the high water events.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to locate suitable stockpile areas for borrow material, which would be used in the construction of the HSDRRS. The completed HSDRRS would lower the risk of harm to citizens and damage to infrastructure during a storm event. The safety of people in the region is the highest priority of the CEMVN. The proposed action results from the need to access and use borrow material during high water events that periodically flood the Bonnet Carré Spillway. During these events, borrow areas within the Spillway may be flooded; consequently, the material from them would not be available for HSDRRS construction projects. Raising existing HSDRRS levee elevations and completing new levees requires the excavation of material from borrow areas to construct HSDRRS to the authorized levels of flood and storm damage risk reduction for local communities.

1.2 AUTHORITY FOR THE PROPOSED ACTION

The authority for the proposed action was provided as part of hurricane and storm damage risk reduction projects in southeastern Louisiana, specifically, the Lake Pontchartrain and Vicinity (LPV) Project and the West Bank and Vicinity (WBV) Project. Congress and the Administration granted a series of supplemental appropriation acts following Hurricanes Katrina and Rita in 2005 to repair and enhance the systems damaged by the storms.

The LPV project was authorized under the Flood Control Act of 1965 (Public Law [P.L.] 89-298, Title II, Section [Sec.] 204), which, as amended, authorized a "project for hurricane protection on Lake Pontchartrain, Louisiana ... substantially in accordance with the recommendations of the Chief of Engineers in House Document 231, Eighty-ninth Congress." The original statutory authorization for the LPV Project was amended by the Water Resources Development Acts (WRDA) of 1974 (P.L. 93-251, Title I, Sec. 92), 1986 (P.L. 99-662, Title V3, Sec. 805), 1990 (P.L. 101-640, Sec. 116), 1992 (P.L. 102-580, Sec. 102), 1996 (P.L. 104-303, Sec. 325), 1999 (P.L. 106-53, Sec. 324), and 2000 (P.L. 106-541, Sec. 432); and the Energy and Water Development Appropriations Acts of 1992 (P.L. 102-104, Title I, Construction, General), 1993 (P.L. 102-377, Title I, Construction, General), and 1994 (P.L. 103-126, Title I, Construction, General).

The Westwego to Harvey Canal Project was authorized by the WRDA of 1986 (P.L. 99-662, Sec. 401(b)). The WRDA of 1996 modified the project and added the Lake Cataouatche Project and the East of Harvey Canal Project (P.L. 104-303, Sec. 101(a)(17) & P.L. 104-303, 101(b)(11)). The WRDA of 1999 combined the three projects into one

project under the West Bank and Vicinity Hurricane Protection Project (P.L. 106-53, Sec. 328).

The Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act of 2006 (3rd Supplemental - P.L. 109-148, Chapter 3, Construction, and Flood Control and Coastal Emergencies) appropriated funds to accelerate the completion of the previously authorized projects and to restore and repair the projects at full Federal expense. The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery of 2006 (4th Supplemental - P.L. 109-234, Title II, Chapter 3, Construction, and Flood Control and Coastal Emergencies) appropriated funds and added authority to raise levee heights where necessary, reinforce and replace floodwalls, and otherwise enhance the projects to provide the levels of risk reduction necessary to achieve the certification required for participation in the National Flood Insurance Program. Additional Supplemental Appropriations include the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act of 2007 (P.L. 110-28, Title IV, Chapter 3, Flood Control and Coastal Emergencies, section 4302) (5th Supplemental), and the 6th Supplemental (P.L. 110-252, Title 3, Chapter 3, Construction).

1.3 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:

Lake Pontchartrain and Vicinity Project

- On 22 January 2010, the CEMVN District Commander signed a Decision Record on IER #32 entitled “Contractor-Furnished Borrow Material #6, Ascension, Plaquemines, and St. Charles the Baptist Parishes, Louisiana.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 18 December 2009, the CEMVN District Commander signed a Decision Record on IER Supplemental #3.a entitled “Jefferson East Bank, Jefferson Parish, Louisiana.” The document describes the impacts due to construction of wave attenuation berms and foreshore protection along the Jefferson Parish lake front and a T-wall, overpass bridge, and traffic detour lane bridge spans at the Lake Pontchartrain Causeway Bridge abutment in Jefferson Parish, Louisiana.”
- On 10 December 2009, the CEMVN District Commander signed a Decision Record on IER Supplemental #11 Tier 2 Borgne entitled “Improved Protection on the Inner Harbor Navigation Canal, Orleans and St. Bernard Parishes, Louisiana.” The document describes the impacts due to the construction of a vertical lift gate in lieu of a sector gate on Bayou Bienvenue, as described in IER #11 Tier 2 Borgne.
- On 29 October 2009, the CEMVN District Commander signed a Decision Record on IER Supplemental #2.a entitled “Lake Pontchartrain and Vicinity, West Return Flood Wall, Jefferson and Orleans Parishes, Louisiana.” The document describes the impacts associated with replacing the existing floodwall with a new T-wall approximately 35 feet to the west of the current alignment

along the east embankment of the Parish Line Canal on the border of Jefferson and Orleans Parishes, Louisiana.

- On 28 September 2009, the CEMVN District Commander signed a Decision Record on IER #30 entitled “Contractor-Furnished Borrow Material #5, St. Bernard and St. James Parishes, Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 20 September 2009, the CEMVN District Commander signed a Decision Record on IER #29 entitled “Pre-Approved Contractor-Furnished Borrow Material #4, Orleans, St. John the Baptist, and St. Tammany Parishes, Louisiana.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 31 July 2009, the CEMVN District Commander signed a Decision Record on IER #28 entitled “Government-Furnished Borrow Material #4, Plaquemines, St. Bernard, and Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas and an access route for use in construction of the HSDRRS.
- On 30 June 2009, the CEMVN District Commander signed a Decision Record for IER #5, entitled “Lake Pontchartrain and Vicinity, Permanent Protection System for the Outfall Canals Project on 17th Street, Orleans Avenue, and London Avenue Canals, Jefferson and Orleans Parishes, Louisiana.” The document evaluates the potential impacts related to constructing permanent pumps on the 17th Street, Orleans Avenue, and London Avenue Canals to provide for 100-year level of risk reduction.
- On 29 June 2009, the CEMVN District Commander signed a Decision Record for IER Supplemental (IERS) #1, entitled “Lake Pontchartrain and Vicinity, LaBranche Wetlands Levee, St. Charles Parish, Louisiana.” The document evaluates the potential impacts related to modifications to actions approved in IER #1.
- On 25 June 2009, the CEMVN District Commander signed a Decision Record for IER #6, entitled “Lake Pontchartrain and Vicinity, New Orleans East, Citrus Lakefront Levee, Orleans Parish, Louisiana.” The document evaluates the potential impacts associated with constructing improved levees on the south shore of Lake Pontchartrain in New Orleans East, Orleans Parish, Louisiana.
- On 23 June 2009, the CEMVN District Commander signed a Decision Record for IER #8, entitled “Lake Pontchartrain and Vicinity, Bayou Dupre Control Structure, St. Bernard Parish, Louisiana.” The document evaluates the potential impacts associated with constructing a new flood control structure on Bayou Dupre.
- On 19 June 2009, the CEMVN District Commander signed a Decision Record for IER #7, entitled “Lake Pontchartrain and Vicinity, New Orleans East Lakefront to Michoud Canal, Orleans Parish, Louisiana.” The document evaluates the potential impacts associated with reconstructing levees, floodwalls, and floodgates around the Bayou Sauvage National Wildlife Refuge.

- On 26 May 2009, the CEMVN District Commander signed a Decision Record for IER #10, entitled “Lake Pontchartrain and Vicinity, Chalmette Loop Levee, St. Bernard Parish, Louisiana.” The document evaluates the impacts related to improving hurricane risk reduction structures in St. Bernard Parish, Louisiana.
- On 13 March 2009, the CEMVN District Commander signed a Decision Record for IER #4, entitled “Lake Pontchartrain and Vicinity, Orleans East Bank, New Orleans Lakefront Levee, West of Inner Harbor Navigation Canal to Eastbank of 17th Street Canal, Orleans Parish, Louisiana.” The document evaluates the potential impacts associated with improving the Orleans lakefront hurricane risk reduction features.
- On 3 February 2009, the CEMVN District Commander signed a Decision Record on IER #25 entitled “Government-Furnished Borrow Material, Orleans, Plaquemines and Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas for use in construction of the HSDRRS.
- On 21 October 2008, the CEMVN District Commander signed a Decision Record on IER #11 Tier 2 Borgne entitled “Improved Protection on the Inner Harbor Navigation Canal, Tier 2 Borgne Orleans and St. Bernard Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with constructing a surge barrier on Lake Borgne.
- On 20 October 2008, the CEMVN District Commander signed a Decision Record on IER #26 entitled “Pre-Approved Contractor-Furnished Borrow Material #3, Jefferson, Plaquemines, and St. John the Baptist Parishes, Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 25 July 2008, the CEMVN District Commander signed a Decision Record on IER #3, entitled “Lake Pontchartrain and Vicinity, Lakefront Levee, Jefferson Parish, Louisiana.” The proposed action includes raising approximately nine and a half miles of earthen levees, completing upgrades to foreshore protection, replacing two floodgates, and completing fronting protection modifications to four existing pump stations in Jefferson Parish, Louisiana.
- On 18 July 2008, the CEMVN District Commander signed a Decision Record on IER #2, entitled “LPV, West Return Floodwall, Jefferson and St. Charles Parishes, Louisiana.” The proposed action includes replacing over 17,900 linear feet of floodwalls in Jefferson and St. Charles Parishes, Louisiana.
- On 9 June 2008, the CEMVN District Commander signed a Decision Record on IER #1, entitled “Lake Pontchartrain and Vicinity, La Branche Wetlands Levee, St. Charles Parish, Louisiana.” The proposed action includes raising approximately nine miles of earthen levees, replacing over 3,000 feet of floodwalls, rebuilding or modifying four drainage structures, closing one drainage structure, and modifying one railroad gate in St. Charles Parish, Louisiana.
- On 30 May 2008, the CEMVN District Commander signed a Decision Record on IER #22 entitled “Government-Furnished Borrow Material, Plaquemines and

Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas for use in construction of the HSDRRS.

- On 6 May 2008, the CEMVN District Commander signed a Decision Record on IER #23 entitled “Pre-Approved Contractor-Furnished Borrow Material #2, St. Bernard, St. Charles, Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with approving contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 14 March 2008, the CEMVN District Commander signed a Decision Record on IER #11 (Tier 1) entitled "Improved Protection on the Inner Harbor Navigation Canal, Orleans and St. Bernard Parishes, Louisiana." The document evaluates potential impacts associated with building navigable and structural barriers to prevent storm surge from entering the Inner Harbor Navigation Canal from Lake Pontchartrain and/or the Gulf Intracoastal Waterway-Mississippi River Gulf Outlet-Lake Borgne complex. Two Tier 2 documents discussing alignment alternatives and designs of the navigable and structural barriers, and the impacts associated with exact footprints, are being completed.
- On 21 February 2008, the CEMVN District 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 evaluates the potential impacts associated with approving government-furnished borrow areas for use in construction of the HSDRRS.
- On 14 February 2008, the CEMVN District 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 evaluates the potential impacts associated with approving contractor-furnished borrow areas for use in construction of the HSDRRS.
- In July 2006, the CEMVN District Commander signed a Finding of No Significant Impact (FONSI) on an EA #433 entitled, “USACE Response to Hurricanes Katrina & Rita in Louisiana.” The document evaluates the potential impacts associated with the actions taken by the USACE as a result of Hurricanes Katrina and Rita.
- On 30 October 1998, the CEMVN District Commander signed a FONSI on EA #279 entitled “Lake Pontchartrain Lakefront, Breakwaters, Pump Stations 2 and 3.” The report evaluates the impacts associated with providing fronting protection for outfall canals and pump stations. It was determined that the action would not significantly impact resources in the immediate area.
- On 2 October 1998, the CEMVN District Commander signed a FONSI on EA #282 entitled “LPV, Jefferson Parish Lakefront Levee, Landside Runoff Control: Alternate Borrow.” The report investigates the impacts of obtaining borrow material from an urban area in Jefferson Parish. No significant impacts to resources in the immediate area were expected.
- On 2 July 1992, the CEMVN District Commander signed a FONSI on EA #169 entitled “LPV, Hurricane Protection Project, East Jefferson Parish Levee System,

Jefferson Parish, Louisiana, Gap Closure.” The report addresses the construction of a floodwall in Jefferson Parish to close a “gap” in the levee system. The area was previously leveed and under forced drainage, and it was determined that the action would not significantly impact the already disturbed area.

- On 22 February 1991, the CEMVN District Commander signed a FONSI on EA #164 entitled “LPV Hurricane Protection – Alternate Borrow Area for the St. Charles Parish Reach.” The report addresses the impacts associated with the use of borrow material from the Mississippi River on the left descending back in front of the Bonnet Carré Spillway Forebay for LPV construction.
- On 30 August 1990, the CEMVN District Commander signed a FONSI on EA #163 entitled “LPV Hurricane Protection – Alternate Borrow Area for Jefferson Parish Lakefront Levee, Reach 3.” The report addresses the impacts associated with the use of a borrow area in Jefferson Parish for LPV construction.
- On 2 July 1991, the CEMVN District Commander signed a FONSI on EA #133 entitled “LPV Hurricane Protection – Alternate Borrow at Highway 433, Slidell, Louisiana.” The report addresses the impacts associated with the excavation of a borrow area in Slidell, Louisiana for LPV construction.
- On 12 September 1990, the CEMVN District Commander signed a FONSI on EA #105 entitled “LPV Hurricane Protection – South Point to Gulf Intracoastal Waterway, A. V. Keeler and Company Alternative Borrow Site.” The report addresses the impacts associated with the excavation of a borrow area in Slidell, Louisiana for LPV construction.
- On 12 March 1990, the CEMVN District Commander signed a FONSI on EA #102 entitled “LPV Hurricane Protection – 17th Street Canal Hurricane Protection.” The report addresses the use of alternative methods of providing flood protection for the 17th Street Outfall Canal in association with LPV activity. Impacts to resources were found to be minimal.
- On 4 August 1989, the CEMVN District Commander signed a FONSI on EA #89 entitled “LPV Hurricane Protection, High Level Plan - Alternate Borrow Site 1C-2B.” The report addresses the impacts associated with the excavation of a borrow area along Chef Menteur Highway, Orleans Parish for LPV construction. The material was used in the construction of a levee west of the Inner Harbor Navigation Canal.
- On 27 October 1988, the CEMVN District Commander signed a FONSI on EA #79 entitled “LPV Hurricane Protection – London Avenue Outfall Canal.” The report investigates the impacts of strengthening hurricane risk reduction at the London Avenue Outfall Canal.
- On 21 July 1988, the CEMVN District Commander signed a FONSI on EA #76 entitled “LPV Hurricane Protection – Orleans Avenue Outfall Canal.” The report investigates the impacts of strengthening hurricane risk reduction at the Orleans Avenue Outfall Canal.
- On 26 February 1986, the CEMVN District Commander signed a FONSI on EA #52 entitled “LPV Hurricane Protection – Geohegan Canal.” The report addresses the impacts associated with the excavation of borrow material from an extension of the Geohegan Canal for LPV construction.

- Supplemental Information Report (SIR) #25 entitled “LPV Hurricane Protection – Chalmette Area Plan, Alternate Borrow Area 1C-2A” was signed by the CEMVN District Commander on 12 June 1987. The report addresses the use of an alternate contractor-furnished borrow area for LPV construction.
- SIR #27 entitled “LPV Hurricane Protection – Alternate Borrow Site for Chalmette Area Plan” was signed by the CEMVN District Commander on 12 June 1987. The report addresses the use of an alternate contractor-furnished borrow area for LPV construction.
- SIR #28 entitled “LPV Hurricane Protection – Alternate Borrow Site, Mayfield Pit” was signed by the CEMVN District Commander on 12 June 1987. The report addresses the use of an alternate contractor-furnished borrow area for LPV construction.
- SIR #29 entitled “LPV Hurricane Protection – South Point to GIWW Levee Enlargement” was signed by the CEMVN District Commander on 12 June 1987. The report discusses the impacts associated with the enlargement of the GIWW.
- SIR #30 entitled “LPV Hurricane Protection Project, Jefferson Lakefront Levee” was signed by the CEMVN District Commander on 7 October 1987. The report investigates impacts associated with changes in Jefferson Parish LPV levee design.
- SIR #17 entitled “LPV Hurricane Protection – New Orleans East Alternative Borrow, North of Chef Menteur Highway” was signed by the CEMVN District Commander on 30 April 1986. The report addresses the use of an alternate contractor-furnished borrow area for LPV construction.
- SIR #22 entitled “LPV Hurricane Protection – Use of 17th Street Pumping Station Material for LPHP Levee” was signed by the CEMVN District Commander on 5 August 1986. The report investigates the impacts of moving suitable borrow material from a levee at the 17th Street Canal in the construction of a stretch of levee from the Inner Harbor Navigation Canal to the London Avenue Canal.
- SIR #10 entitled “LPV Hurricane Protection, Bonnet Carré Spillway Borrow” was signed by the CEMVN District Commander on 3 September 1985. The report evaluates the impacts associated with using the Bonnet Carré Spillway as a borrow source for LPV construction, and found “no significant adverse effect on the human environment.”
- In December 1984, an SIR to complement the Supplement to final EIS on the LPV Hurricane Protection project was filed with the U.S. Environmental Protection Agency (USEPA).
- The final EIS for the LPV Hurricane Protection Project, dated August 1974. A Statement of Findings was signed by the CEMVN on 2 December 1974. Final Supplement I to the EIS, dated July 1984, was followed by a Record of Decision (ROD), signed by the CEMVN on 7 February 1985. Final Supplement II to the EIS, dated August 1994, was followed by a ROD signed by CEMVN on 3 November 1994.

- A report entitled “Flood Control, Mississippi River and Tributaries,” published as House Document No. 90, 70th Congress, 1st Session, submitted 18 December 1927, resulted in authorization of a project by the Flood Control Act of 1928. The project provided comprehensive flood control for the lower Mississippi Valley below Cairo, Illinois. The Flood Control Act of 1944 authorized the USACE to construct, operate, and maintain water resources development projects. The Flood Control Acts have had an important impact on water and land resources in the proposed project area.

West Bank and Vicinity Project

- On 22 January 2010, the CEMVN District Commander signed a Decision Record on IER #32 entitled “Contractor-Furnished Borrow Material #6, Ascension, Plaquemines, and St. Charles the Baptist Parishes, Louisiana.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 04 December 2009, the CEMVN District Commander signed a Decision Record on IER #13 entitled “West Bank and Vicinity, Hero anal Levee and Eastern Tie-In, Plaquemines Parish, Louisiana.” The document describes the impacts associated with constructing the Eastern Tie-In portion of the HSDRRS.
- On 28 September 2009, the CEMVN District Commander signed a Decision Record on IER #30 entitled “Contractor-Furnished Borrow Material #5, St. Bernard and St. James Parishes, Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 20 September 2009, the CEMVN District Commander signed a Decision Record on IER #29 entitled “Pre-Approved Contractor-Furnished Borrow Material #4, Orleans, St. John the Baptist, and St. Tammany Parishes, Louisiana.” The document evaluates the potential impacts associated with the actions taken by commercial contractors as a result of excavating contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 31 July 2009, the CEMVN District Commander signed a Decision Record on IER #28 entitled “Government-Furnished Borrow Material #4, Plaquemines, St. Bernard, and Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas and an access route for use in construction of the HSDRRS.
- On 12 June 2009, the CEMVN District Commander signed a Decision Record on IER #16, entitled “Western Tie-In, Jefferson and St. Charles Parishes, Louisiana.” The document describes the potential impacts associated with constructing a new levee to provide 100-year level of risk reduction for the project vicinity.
- On 18 February 2009, the CEMVN District 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 document describes the potential impacts associated with construction of approximately 3 miles of levee and floodwall in the project vicinity.

- On 3 February 2009, the CEMVN District Commander signed a Decision Record on IER #25 entitled “Government-Furnished Borrow Material, Orleans, Plaquemines and Jefferson Parishes, Louisiana.” The document evaluates the potential impacts associated with approving government-furnished borrow areas for use in construction of the HSDRRS.
- On 21 January 2009, the CEMVN District Commander signed a Decision Record on IER #17 entitled “Company Canal Floodwall, Jefferson Parish, Louisiana.” The document evaluates the proposed construction and maintenance of the 100-year level of hurricane and storm damage risk reduction along the Company Canal from the Bayou Segnette State Park to the New Westwego Pumping Station.
- On 20 October 2008, the CEMVN District Commander signed a Decision Record on IER #26 entitled “Pre-Approved Contractor-Furnished Borrow Material #3, Jefferson, Plaquemines, and St. John the Baptist Parishes, Louisiana, and Hancock County, Mississippi.” The document evaluates the potential impacts associated with approving contractor-furnished borrow areas for use in construction of the HSDRRS.
- On 18 February 2009, the CEMVN District 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 document describes the potential impacts associated with construction of construct approximately 3 miles of levee and floodwall in the project vicinity.
- On 26 August 2008, the CEMVN District Commander signed a Decision Record on IER #14, entitled “Westwego to Harvey, Levee Jefferson Parish, Louisiana.” The document was prepared to examine the potential environmental impacts associated with the proposed construction and maintenance of 100-year level of hurricane and storm damage risk reduction along the WBV, Westwego to Harvey Levee project area.
- On 12 June 2008, the CEMVN District Commander signed a Decision Record on IER #15, entitled “Lake Cataouatche Levee, Jefferson Parish, Louisiana.” The proposed action includes constructing a 100-year level of protection in the project area.
- On 30 May 2008, the CEMVN District Commander signed a Decision Record on IER #22 entitled “Government-Furnished Borrow Material, Plaquemines and Jefferson Parishes, Louisiana.” The document was prepared to evaluate the potential impacts associated with approving government-furnished borrow areas for use in construction of the HSDRRS.
- On 6 May 2008, the CEMVN District Commander signed a Decision Record on IER #23 entitled “Pre-Approved Contractor-Furnished Borrow Material #2, St. Bernard, St. Charles, Plaquemines Parishes, Louisiana, and Hancock County, Mississippi.” The document was prepared to evaluate the potential impacts associated with approving contractor-furnished borrow areas for use in construction of the HSDRRS.

- On 21 February 2008, the CEMVN District 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 approving government-furnished borrow areas for use in construction of the HSDRRS.
- On 14 February 2008, the CEMVN District 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 approving contractor-furnished borrow areas for use in construction of the HSDRRS.
- In July 2006, the CEMVN District Commander signed a FONSI on an 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 23 August 2005, the CEMVN District 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 22 February 2005, the CEMVN District 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 5 May 2003, the CEMVN District Commander signed a FONSI on EA #337 entitled “Algiers Canal Alternative Borrow Site.”
- On 19 June-2003, the CEMVN District 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 16 May 2002, the CEMVN District 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 30 August 2000, the CEMVN District 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 18 August 1998, the CEMVN District 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 ROD was signed by the CEMVN District Commander in September 1998.
- The final EIS for the WBV, Lake Cataouatche, Hurricane Protection Project was completed. A ROD was signed by the CEMVN District 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 investigates 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 protection 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 12 January 1994, the CEMVN District Commander signed a FONSI on an EA #198 entitled, “West Bank of the Mississippi River in the Vicinity of New Orleans, Louisiana, 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 District Commander completed a feasibility report entitled “WBV (East of the Harvey Canal).” The study investigates 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 protection for the area east of the Algiers Canal deviate from the National Economic Development Plan’s level of protection and provide protection for the SPH. The Division Engineer’s Notice was issued on 1 September 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 20 March 1992, the CEMVN District 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 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. The study found a 100-year level of protection 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 3 June 1991, the CEMVN District Commander signed a FONSI on EA #136 entitled “West Bank Additional Borrow Site between Hwy 45 and Estelle PS.”
- On 15 March 1990, the CEMVN District 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 life for the Plaquemines West Bank levee upgrade, as part of LPV construction.
- 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 protection 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.

1.4 INTEGRATION WITH OTHER IERS

In addition to evaluating the proposed River Road, East St. John North, and East St. John South stockpile areas in this IER, the CEMVN is preparing a draft Comprehensive Environmental Document (CED) that will describe all HSDRRS work completed and remaining to be constructed. The purpose of the draft CED is to document the work completed by the CEMVN on a system-wide scale. The draft CED will describe the integration of individual IERs into a systematic planning effort. Analysis of overall cumulative impacts, a finalized mitigation plan, and future operations and maintenance requirements will also be included. Additionally, the draft CED will contain updated information for any IER that had incomplete or unavailable data at the time it was available for public review.

The draft CED will be available for a 60-day public review period. The document will be posted on www.nolaenvironmental.gov, or can be requested by contacting the CEMVN. A notice of availability will be mailed/e-mailed to interested parties advising them of the availability of the draft CED for review. Additionally, a notice will be placed in national and local newspapers. Upon completion of the 60-day review period, all comments will be compiled and appropriately addressed. Upon resolution of any comments received, a final CED will be prepared, signed by the District Commander, and made available to any stakeholders requesting a copy.

Compensatory mitigation for unavoidable impacts associated with this and other proposed HSDRRS projects will be documented in mitigation IERs, which are being written as those impacts are assessed. Mitigation will also be discussed in the CED.

1.5 PUBLIC CONCERNS

The CEMVN has provided numerous opportunities to the public to provide input and comments about the proposed HSDRRS work throughout the planning process through a number of outlets (i.e., public meetings; written and verbal comments; www.nolaenvironmental.gov). The foremost public concern in the project area is

reducing the risk of hurricane, storm, and flood damage for businesses and residences, and enhancing public safety during major storm events in the Greater New Orleans metropolitan area. Comments at public meetings indicated concern over the risk to current levees and floodwalls from overtopping from storm-induced tidal surges during major storm events, and the potential risk of levee or floodwall failure during a major storm event. A key concern of local officials is to increase public confidence in the HSDRRS so that the physical and economic recovery of the area can proceed. The scheduling of construction of the HSDRRS is also a concern. Local officials also want the public to be aware that the completed HSDRRS is not intended to invalidate evacuation measures.

1.6 DATA GAPS AND UNCERTAINTIES

Transportation impacts and routes for the delivery of borrow material from the Bonnet Carré Spillway to the proposed stockpile areas, and from the stockpile areas to construction sites have not been fully determined. This could have localized short-term impacts to transportation corridors that cannot be quantified at this time. The CEMVN is completing a transportation study to determine potential impacts associated with the transporting of material to construction sites. This analysis will be discussed in the CED.

Cumulative noise impacts are not fully known at this time. Any additional noise impacts that have not been identified will be discussed in the CED. Once the impacts associated with the proposed stockpile areas described in this IER in addition to any currently unidentified noise and transportation impacts associated with all of the HSDRRS work are determined, an analysis will be discussed in the CED.

Details on environmental justice impacts from potential use of the proposed stockpile areas will be further analyzed when additional project planning data become available at the conclusion of HSDRRS small group neighborhood focus meetings. These details will be included in the CED.

Air quality impacts due to use of the proposed sites as stockpile areas are not fully known at this time, and additional or cumulative air impacts will be discussed in the CED.

Cumulative visual impacts due to use of the proposed sites as stockpile areas are not fully known at this time. Additional or cumulative visual impacts will be discussed in the CED.

2. ALTERNATIVES

2.1 ALTERNATIVES DEVELOPMENT AND PRELIMINARY SCREENING CRITERIA

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 (P.L. 93-251) requires Federal agencies to give consideration to non-structural measures to reduce or prevent flood damage. This IER discusses the potential impacts associated with using three proposed stockpile areas, and as such there are no non-structural alternatives. Non-structural alternatives have been and will continue to be evaluated in the IERs discussing the construction of the HSDRRS levees, floodwalls, and structures.

The U.S. Fish and Wildlife Service (USFWS) supports the CEMVN’s prioritization of selection for potential borrow areas in the following order: existing commercial areas, upland sources, previously disturbed/manipulated wetlands within a levee system, and

low-quality wetlands outside a levee system (letter dated August 7, 2006, appendix D). The CEMVN is using this prioritization for the selection of potential stockpile areas as well.

The USFWS also recommends the following protocol be adopted and utilized to identify borrow sources in descending order of priority:

1. “Permitted commercial sources, authorized borrow sources for which environmental clearance and mitigation have been completed, or non-functional levees after newly constructed adjacent levees are providing equal protection.
2. Areas under forced drainage that are protected from flooding by levees, and that are:
 - a) non-forested (e.g., pastures, fallow fields, abandoned orchards, former urban areas and non-wetlands;
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow) or non-forested wetlands (e.g., wetland pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).
3. Areas that are outside a forced drainage system and levees, and that are:
 - a) non-forested (e.g., pastures, fallow fields, abandoned orchards, former urban areas) and non-wetlands;
 - b) wetland forests dominated by exotic tree species (i.e., Chinese tallow) or non-forested wetlands (e.g., wetland pastures), excluding marshes;
 - c) disturbed wetlands (e.g., hydrologically altered, artificially impounded).”

The CEMVN is using this guidance for the selection of potential stockpile areas. The USFWS is currently assisting the CEMVN in meeting this protocol.

2.2 DESCRIPTION OF THE ALTERNATIVES

Two alternatives considered are discussed in this document. These include the no action and the proposed action.

No Action. Under the no action alternative, the proposed stockpile areas would not be used in construction of the HSDRRS. During times of high water when the Bonnet Carré Spillway is not available as a source for borrow material, active HSDRRS levee and floodwall projects would be built to authorized levels using approved borrow areas not within the Bonnet Carré Spillway (e.g., approved government-furnished or contractor-furnished borrow areas); stockpile areas identified in approved IERS; or other stockpile areas yet to be identified.

Proposed Action. The proposed action consists of utilizing the proposed River Road, East St. John North, and East St. John South stockpile areas, as discussed in section 2.3.

2.3 PROPOSED ACTION

The proposed action (preferred alternative) consists of potentially utilizing the River Road, East St. John North, and East St. John South stockpile areas for borrow material to be used in construction of the HSDRRS (figures 1-3). Material would be excavated from the Bonnet Carré Spillway by a CEMVN contractor, and hauled via truck to the proposed stockpile areas. The material would be stored and processed at the sites and, when needed, would be transported to HSDRRS construction sites. It is expected that this activity would commence prior to high water events, and end after these events; use of the sites is expected to be limited between the months of January and July, although use may extend beyond those months depending on need. The sites could be used beginning in 2010 and continuing through 2012. “Temporary” as it is used throughout this document refers to this three-year timeframe.

Stockpiling activities at the proposed sites include truck transport onto and from the sites; moving borrow material around the sites via dump truck and bull dozer; piling material up to 20 feet high by use of bull dozers; and short term equipment storage. Due to the proximity of the sites to residential areas and the East St. John High School, safety precautions would be taken at the sites to minimize impacts to people. These actions would include the use of fencing and signage around the properties and traffic flagmen if needed on River Road (LA-48) and Airline Highway (US-61).

After stockpiling concludes, all stockpiled material and construction equipment (trucks, excavators, silt fencing, etc.) would be removed, leaving only a fallow site. Any crops currently being farmed at the sites would not be replanted; the landowner(s) could choose to do this, and if so the site(s) would return to its original use.

- The proposed 42-acre River Road site is located in New Sarpy, St. Charles Parish, Louisiana (figures 1 and 2). The site is currently used for hay farming, and is bounded by the residential Vans Lane on the northwest, the residential Ormond Meadows Drive on the southeast, and River Road (LA-48) on the west. To the east of the site is the Illinois Central Railroad. The Seafood Pot restaurant is located across the northwest corner of the site from Vans Lane. The Motiva Norco Refinery is located approximately one mile north of the site. Boundaries of the site are approximately 125 feet from nearby residences to the north and south.
- The proposed 35-acre East St. John North and 65-acre East St. John South sites are located on opposite sides of Airline Highway (US-61) in St. John the Baptist Parish, Louisiana (figures 1 and 3). The sites are located in a rural area, with some residential housing and an industrial site nearby. The East St. John North site is currently used for hay farming and is directly west of the East St. John High School. The eastern boundary of the site adjoins the campus of East St. John High School. The East St. John South site is currently planted with sugarcane, and is directly south of the East St. John High School across Airline Highway (US-61). The East St. John South site is bounded to the east by the residential River Pointe Road in the Cole’s Landing subdivision. The eastern boundary of the site adjoins residential properties on the western side of River Pointe Road.

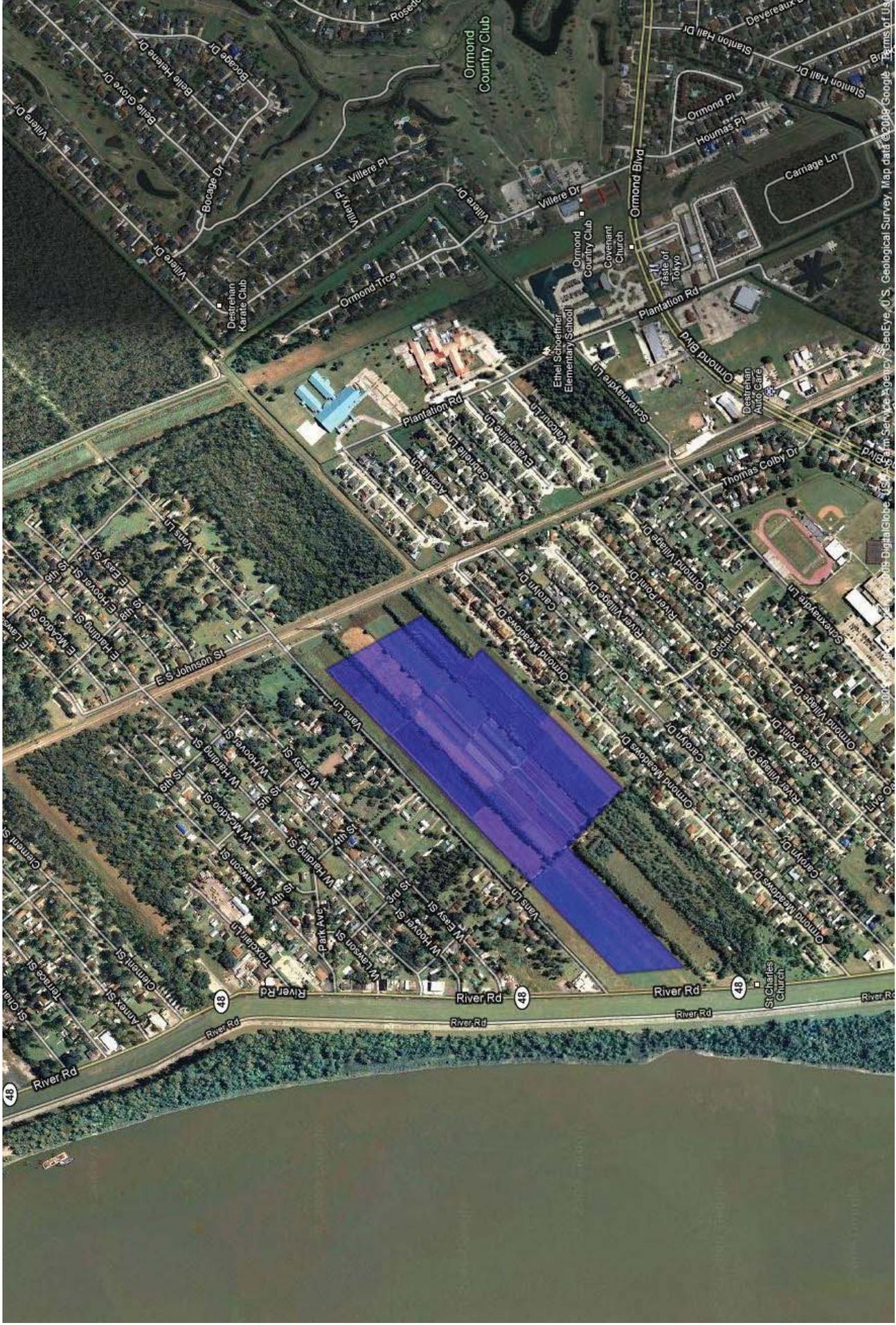


Figure 2: Area map of the proposed River Road stockpile area



Figure 3: Area map of the proposed East St. John North and East St. John South stockpile areas

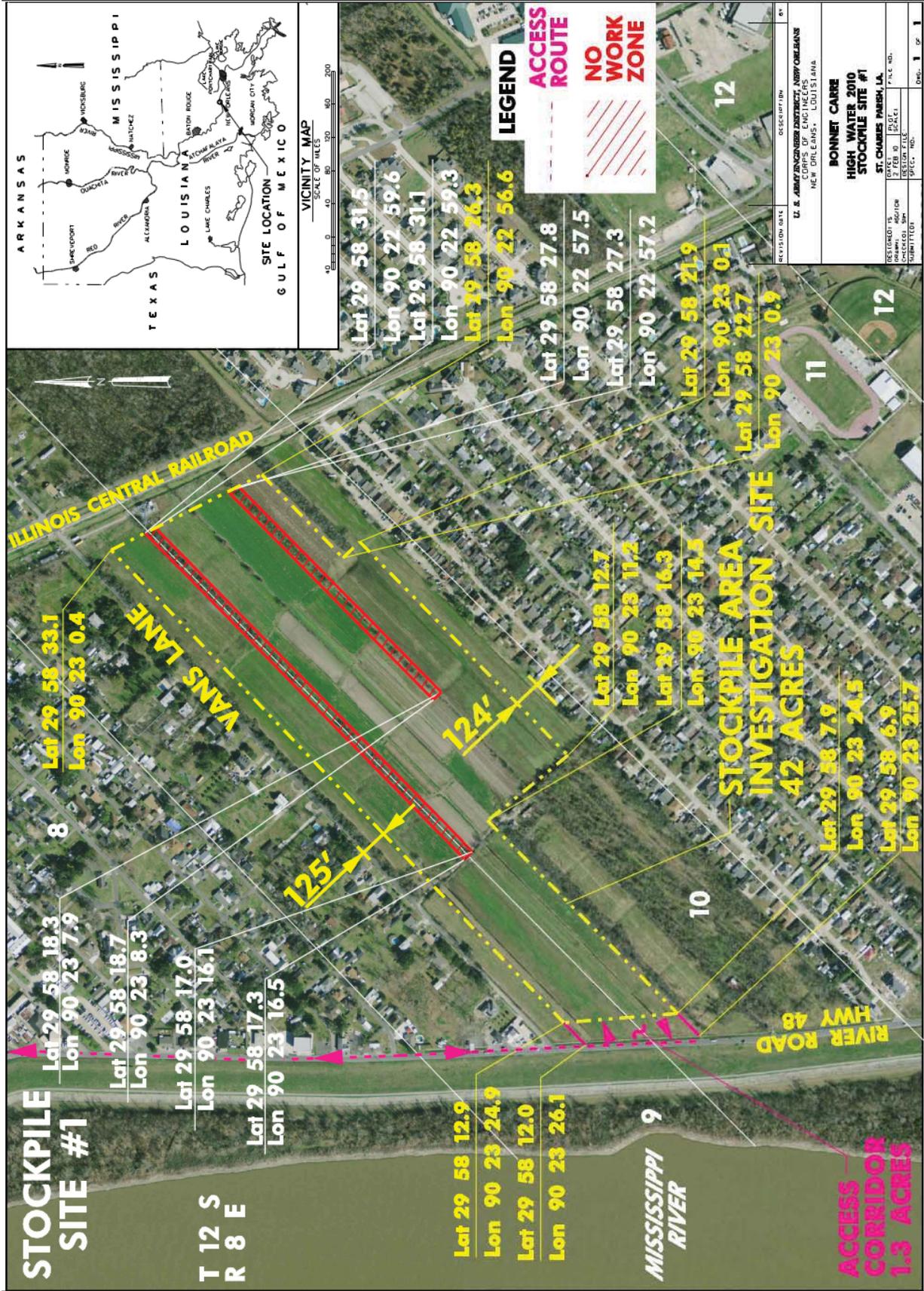


Figure 4: Site map of the proposed River Road stockpile area.

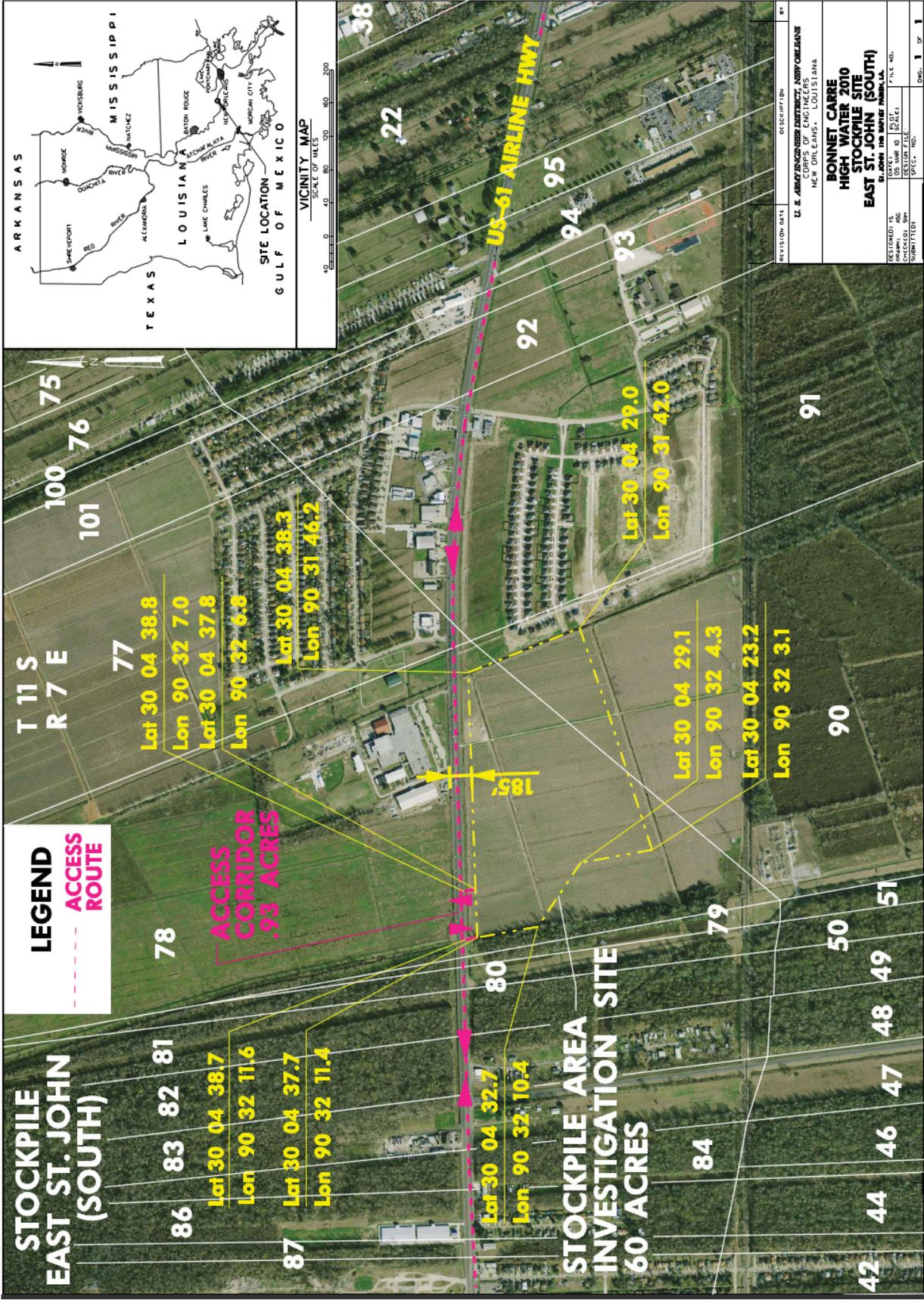


Figure 6: Site map of the proposed East St. John South stockpile area.

2.4 ALTERNATIVES TO THE PROPOSED ACTION

The CEMVN located eleven potential stockpile areas within the New Orleans Metropolitan Area based on distance from the Bonnet Carré spillway and advertisements of availability. Landowners of these eleven potential sites were contacted, and only those of the River Road, East St. John North, and East St. John South sites responded to the CEMVN's request to investigate their sites.

There are three alternatives to the proposed action.

- No Action. As described in section 2.2. Stockpile areas yet to be identified and investigated could potentially be approved for use for HSDRRS projects.
- Use of Potential Footprint Stockpile Areas. Under this alternative, areas within the approved footprint of a HSDRRS project could potentially be used as temporary stockpile sites. These areas could include sites within the approved footprint of levee or floodwall projects that may be used for staging or other similar purposes, as described in IERs #1 - #17. As this action would have been discussed in an approved IER, it will not be further discussed in this document.
- Use of Contractor-Furnished Borrow Material. Under this alternative, CEMVN construction contractors could use contractor-furnished borrow material approved for use in IER #19, IER #23, IER #26, IER #29, IER #30, and/or IER #32. Potential impacts due to the use of any approved contractor-furnished borrow areas are discussed in these IERs. As this action would have been discussed in an approved IER, it will not be further discussed in this document.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 ENVIRONMENTAL SETTING

The proposed stockpile areas described in this report are located in southeastern Louisiana. For the purposes of this report, the project study area is defined as southeastern Louisiana.

Fauna and Flora

The Louisiana Coastal Plain area contains an extraordinary diversity of estuarine habitats that range from narrow natural levee and beach ridges to expanses of bottomland hardwood (BLH) forest, forested swamps and fresh, brackish, saline marshes, and pasturelands. The wetlands support various functions and values, including commercial fisheries, harvesting of furbearers, recreational fishing and hunting, ecotourism, critical wildlife habitat (including that for threatened and endangered species), water quality improvement, navigation and waterborne commerce, flood control, and buffering protection from storms.

Terrestrial animals that may inhabit the area include nutria, muskrat, raccoon, mink, and otter, which are harvested for their fur. White-tailed deer, feral hogs, rabbits, various small mammals, and a variety of birds, reptiles, amphibians, and mosquitoes also occur in the study area.

3.2 SIGNIFICANT RESOURCES

This section contains a list of the significant resources located in the vicinity of the proposed stockpile areas, and describes in detail those resources that may be impacted directly, indirectly, or cumulatively by the proposed action. 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 impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR §1508.7).

The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of Federal, state, or regional agencies and organizations; technical and scientific agencies, groups, and 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 action.

Table 1: Significant Resources in the Project Area

Significant Resource	Impacted	Not Impacted
Jurisdictional Wetlands		X
Non-Jurisdictional Bottomland Hardwood Forest		X
Upland Areas		X
Farmland & Farmland Soils	X	
Wildlife	X	
Threatened and Endangered Species		X
Cultural Resources		X
Recreational Resources	X	
Noise	X	
Air Quality	X	
Water Quality	X	
Aesthetics	X	
Socioeconomics	X	

3.2.1 Jurisdictional Wetlands

Existing Conditions

The USACE has regulatory authority over jurisdictional waters of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). The CEMVN is working diligently to avoid impacts to jurisdictional wetlands (as defined by Section 404 of the CWA) when investigating and approving potential stockpile and borrow sites for use in construction of the HSDRRS. The CEMVN selection prioritization of potential stockpile and borrow areas (section 2.1), as well as guidance from the USFWS (appendix D), relating to potential impacts to jurisdictional wetlands have been and will continue to be followed. The CEMVN will coordinate with

governmental agencies and the public if jurisdictional wetlands may be impacted due to future stockpiling activities.

During initial investigations, a jurisdictional wetland determination from the CEMVN Regulatory Functions Branch was completed for each of the three potential stockpile areas.

- *River Road*
The CEMVN jurisdictional wetland determination MVN 2005-3661-115 dated 15 September 2009 indicates that the site does not contain jurisdictional wetlands or jurisdictional “404 other waters.” In addition, there are no known jurisdictional wetlands within the immediate vicinity of the proposed site.
- *East St. John North*
The CEMVN jurisdictional wetland determination MVN 2005-3661-117 dated 07 October 2009 indicates that the site does not contain jurisdictional wetlands or jurisdictional “404 other waters.” There are jurisdictional wetlands abutting the north end of the site.
- *East St. John South*
The CEMVN jurisdictional wetland determination MVN 2005-3661-117 dated 07 October 2009 indicates that the site does not contain jurisdictional wetlands or jurisdictional “404 other waters.” In addition, there are no known jurisdictional wetlands within the immediate vicinity of the proposed site.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to jurisdictional wetlands would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas.

Indirect Impacts

Under the no action alternative, no indirect impacts to jurisdictional wetlands would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to jurisdictional wetlands would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas.

The proposed River Road site is the only potential stockpile area in St. Charles Parish that is being investigated for use in construction of the HSDRRS. The proposed East St. John North and East St. John South sites are the only potential stockpile areas in St. John the Baptist Parish that are being investigated for use in construction of the HSDRRS. As such, jurisdictional wetlands would not be cumulatively impacted in the region because of HSDRRS stockpiling activities. Jurisdictional wetlands would be cumulatively impacted in the region because of

other HSDRRS activities, specifically work described in IER #1 and IER #2 would impact wetlands.

Cumulative impacts to jurisdictional wetlands would continue in the project area under the no action alternative. Historical and present wetland losses and gains in southeastern Louisiana have been caused by a multitude of natural and anthropogenic actions (Barras et al., 2004). Coastal wetland loss has occurred for thousands of years in Louisiana, and has until the 20th century been balanced by various natural wetland building processes (LACOAST, 1997). Multiple factors have been associated with coastal land loss, including the inhibition of sediment movement into coastal systems due to levee systems along the Mississippi River; man-made canals and their associated hydrologic changes (i.e., saltwater intrusion); a decline of suspended sediments coming from the Mississippi River due to upriver dams and other projects; erosion caused by wave action and boating activity; geologic compaction and faulting; storm events, including hurricanes; and relative sea level rise (Boesch et al., 1994). Public and private wetland creation and restoration projects have contributed to wetland gain in southeastern Louisiana. Major programs and initiatives include the Coastal Wetlands Planning, Protection and Restoration Act program; the Beneficial Use of Dredged Material program; WRDA restoration projects (e.g., Davis Pond Freshwater Diversion, Caernarvon Freshwater Diversion); vegetation restoration projects (e.g., National Resources Conservation Service Plant Materials Center); Louisiana state restoration projects; the Louisiana Parish Coastal Wetland Restoration Program; Federal Emergency Management Agency restoration projects; public and private parties' initiatives, including those of non-governmental organizations and corporations; and private mitigation banks. It is expected that the trend of wetland loss would continue, the rate of which would be slowed by the previously mentioned wetland creation and restoration initiatives.

Human-induced impacts to wetlands have contributed the most to wetland loss in leveed areas. Most of these impacts have been associated with the conversion of wetland areas for agriculture and residential housing. These actions are regulated by the USACE CWA Section 404 regulatory program, and wetland losses are mitigated for through the program. It is expected that this historical trend of anthropogenic impacts would continue to impact non-protected leveed wetlands in the region. It is unknown whether or not jurisdictional wetlands have been impacted for Federal, state, local, or private stockpiling activities in Southeastern Louisiana.

Historical and projected losses of wetlands in southeastern Louisiana have been analyzed and discussed in *Coast 2050: Towards a Sustainable Coastal Louisiana* (LCWCRTF, 1998), the final Louisiana Coastal Area (LCA), Louisiana - Ecosystem Restoration Study (USACE, 2004), Louisiana's Comprehensive Master Plan for a Sustainable Coast (LACPRA, 2007), and the ongoing USACE Louisiana Coastal Protection and Restoration project.

Proposed Action

- *All Sites*

Direct Impacts

No direct impacts to jurisdictional wetlands would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas, as there

are no wetlands located on the sites. Any jurisdictional wetland areas outside of the proposed stockpile areas would be avoided.

Indirect Impacts

No indirect impacts to jurisdictional wetlands at the River Road, East St. John North, and East St. John South stockpile areas, as there are no wetlands located on the sites. Potential indirect impacts to the jurisdictional wetlands located to the immediate north of the East St. John North due to sediment run-off would be mitigated by the use of best management practices (BMP) such as silt fencing and hosing down fugitive dust with water, as described in section 3.2.11; these impacts would not be permanent, and water quality is expected to revert to ambient levels after project completion.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas would not contribute to cumulative wetland loss, as there are no wetlands located on the sites. Cumulative impacts to jurisdictional wetlands would continue in the project area and would be similar to those described for the No Action alternative.

3.2.2 Non-Jurisdictional Bottomland Hardwood Forest

Existing Conditions

Bottomland hardwood forest (BLH) is a habitat that is found throughout southeastern Louisiana. The typically productive forests are found in low-lying areas, and are usually dominated by deciduous trees such as hackberry, Chinese tallow tree, pecan, American elm, live oak, water oak, green ash, bald cypress, black willow, box elder, and red maple. Typical understory plants include dewberry, elderberry, ragweed, Virginia creeper, and poison ivy. Hard mast (nuts) and soft mast (samaras, berries) provide a valuable nutritional food source for birds, mammals, and other wildlife species.

The USACE has regulatory authority over jurisdictional Waters of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act (CWA), as noted in section 3.2.1. Non-jurisdictional BLH are those habitats that do not meet all three wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology), and thus are outside of the jurisdiction of the USACE's Regulatory Program (USACE, 1987). Section 906(b) of WRDA 1986 requires mitigation for impacts to BLH caused by an USACE project.

Staff from the CEMVN and the USFWS visited the proposed stockpile areas to assess the presence of BLH habitat (table 2).

- *River Road*
The proposed River Road stockpile area is currently used for hay farming. Tree windrows on the farm are comprised of typical BLH species. These trees would be avoided and are not part of the proposed stockpile area (figure 4). An area of approximately 14 acres of BLH and mixed BLH-farmland is located directly south of the site (figure 4).
- *East St. John North*
The proposed East St. John North stockpile area is currently used for hay farming, and does not presently include any BLH habitat. A forested area is found to the west of the site; it is likely this area contains typical BLH species.

- *East St. John South*
The proposed East St. John South stockpile area is currently used for sugarcane farming, and does not presently include any BLH habitat. A forested area is found to the west of the site; it is likely this area contains typical BLH species.

Table 2: Non-jurisdictional BLH at proposed stockpile areas

Proposed Stockpile Area	Acres Non-jurisdictional BLH	AAHUs
River Road	0.0	0.0
East St. John North	0.0	0.0
East St. John South	0.0	0.0
Total	0.0	0.0

Discussion of Impacts

No Action

- *All Sties*

Direct Impacts

Under the no action alternative, no direct impacts to non-jurisdictional BLH would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas due to the proposed action. The proposed sites would not be used as stockpile areas.

Indirect Impacts

Under the no action alternative, no indirect impacts to non-jurisdictional BLH would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas due to the proposed action. The proposed sites would not be used as stockpile areas.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to non-jurisdictional BLH would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas due to the proposed action. The proposed sites would not be used as stockpile areas.

The proposed River Road site is the only potential stockpile area in St. Charles Parish that is being investigated for use in construction of the HSDRRS. The proposed East St. John North and East St. John South sites are the only potential stockpile areas in St. John the Baptist Parish that are being investigated for use in construction of the HSDRRS. Non-jurisdictional BLH could be cumulatively impacted in the region because of other HSDRRS activities, including, for example, the excavation of the approved 3C Riverside Phase 3 contractor-furnished borrow area (IER #32).

Cumulative impacts to non-jurisdictional BLH would continue in the project area under the no action alternative. Non-jurisdictional BLH habitat in the project area has historically been affected by residential, commercial, and industrial development. Land has been converted for residential, commercial, and industrial uses in a significant portion of leveed areas in the region. It is unknown whether or not jurisdictional wetlands have been impacted for Federal, state, local, or private stockpiling activities in Southeastern Louisiana. It is expected that this

historical trend would continue to impact non-jurisdictional BLH habitat in the region.

Proposed Action

The USFWS has assessed the environmental impacts of the proposed action. The agency has determined that the proposed action would not have unavoidable impacts to non-jurisdictional BLH habitat, which is quantified by Average Annualized Habitat Units (AAHUs) (table 2). Habitat Units (HU) represent a numerical combination of habitat quality (Habitat Suitability Index) and habitat quantity (acres) within a given area at a given point in time. AAHUs represent the average number of HUs within any given year over the project life for a given area.

- *All Sites*

Direct Impacts

No direct impacts to non-jurisdictional BLH would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Any non-jurisdictional BLH habitat outside of the proposed stockpile areas, including the tree windrows at the River Road site, would be avoided.

Indirect Impacts

Indirect impacts to non-jurisdictional BLH at the River Road, East St. John North, and East St. John South stockpile areas would likely occur. Since stockpiling activity could surround the tree windrows at the River Road site, there would likely be temporary diminished water quality due to sediment run-off.

Additionally, BLH habitat located in the vicinity of the River Road, East St. John North, and East St. John South sites would likely be impacted in a similar manner. Potential diminished water quality affecting BLH habitat due to sediment run-off would be mitigated by the use of BMPs such as silt fencing and hosing down fugitive dust with water, as described in section 3.2.11. These impacts would not be permanent, and water quality is expected to revert to ambient levels after project completion.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas would not contribute to cumulative non-jurisdictional BLH loss. Cumulative impacts to non-jurisdictional BLH would continue in the project area and would be similar to those described for the No Action alternative.

3.2.3 Upland Resources

For the purposes of this IER, upland resources are considered to be any non-wetland areas. Non-jurisdictional BLH habitat, although part of this definition, is discussed separately in section 3.2.2. Impacts to farmland and farmland soils, which may be located in upland areas, are discussed in section 3.2.4. Upland areas include maintained and unmaintained pasture, overgrown/vacant areas, and forested areas that are neither wetland nor non-jurisdictional BLH.

Existing Conditions

- *River Road*
The proposed stockpile area is currently being used for hay farming. Impacts to farmland and farmland soils are discussed in section 3.2.4. There are no other upland resources at this site.

- *East St. John North*
The proposed East St. John North stockpile area is currently being used for hay farming. Impacts to farmland and farmland soils are discussed in section 3.2.4. There are no other upland resources at this site.
- *East St. John South*
The proposed East St. John South stockpile area is currently being used for sugarcane farming. Impacts to farmland and farmland soils are discussed in section 3.2.4. There are no other upland resources at this site.

3.2.4 Farmland & Farmland Soils

Existing Conditions

The National Resources Conservation Service (NRCS) uses a land evaluation and site assessment system to establish a farmland conversion impact rating score on proposed sites. This score is used by Federal agencies in assessing potential impacts to farmland and farmland soils in potential project areas. As identified by the NRCS, the proposed River Road, East St. John North, and East St. John South stockpile areas contain prime farmland soils.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to farmland or farmland soils would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas. Any potential direct impacts to farmland soils currently on the sites would depend on the alternate uses to which landowners might dedicate this acreage.

Indirect Impacts

Under the no action alternative, no indirect impacts to farmland or farmland soils would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas. Any potential indirect impacts to farmland soils currently on the sites would depend on what the landowners decide to do with the proposed stockpile areas.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to farmland or farmland soils would occur at the proposed River Road, East St. John North, and East St. John South stockpile areas. The proposed sites would not be used as stockpile areas. Any potential cumulative impacts to farmland soils would depend on what the landowners decide to do with the proposed stockpile areas.

The proposed River Road site is the only potential stockpile area in St. Charles Parish that is being investigated for use in construction of the HSDRRS. The proposed East St. John North and East St. John South sites are the only potential stockpile areas in St. John the Baptist Parish that are being investigated for use in construction of the HSDRRS. Farmland or farmland soils could be cumulatively

impacted in the region because of other HSDRRS activities, including, for example, the excavation of the approved 3C Riverside Phase 1 and Phase 2 contractor-furnished borrow areas (IER #23) and the approved 3C Riverside Phase 3 contractor-furnished borrow area (IER #32).

Farmland and farmland soils in the project area have historically been affected by residential, commercial, and industrial development. Land has been converted for residential, commercial, and industrial uses in a significant portion of leveed areas in the region, including for use as borrow areas for HSDRRS and other Federal, state, and local storm damage risk reduction construction work. It is expected that this historical trend would continue to impact farmland in the region.

Proposed Action

- *All Sites*

Direct Impacts

Direct impacts to farmland and farmland soils would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Borrow material could be stored and processed at the sites through 2012. Stockpiling, processing, and transporting are expected to happen prior to and during high water events, usually January through July. The sites could not be used for farming until after use of the site concludes in 2012.

Borrow material would be trucked from the Bonnet Carré Spillway to the sites. It would be hauled around the sites and piled by bulldozers and other construction equipment. Material would be transported by truck from the stockpile areas to HSDRRS construction sites when needed.

After stockpiling concludes, all stockpiled material and construction equipment (trucks, excavators, silt fencing, etc.) would be removed, leaving only a fallow site. The borrow material that was stored at the sites would be removed, leaving only the native soil behind. Any crops currently being farmed at the sites would not be replanted; the landowners could choose to do this, and if so, the sites would return to their original uses. Any additional potential direct impacts to farmland and farmland soils would depend on what the landowners decide to do with the proposed sites after their use as stockpile areas.

Indirect Impacts

No indirect impacts to farmland soils are expected to occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Any farmland outside of the proposed stockpile areas would be avoided.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas is not expected to contribute to the cumulative loss of farmland and farmland soils in the region, as the impacts are temporary and the sites would be converted to their original condition. Any potential cumulative impacts to farmland soils would depend on what the landowners decide to do with the proposed sites after their use as stockpile areas. Cumulative impacts to farmland would continue in the project area and would be similar to those described for the No Action alternative.

3.2.5 Wildlife

Existing Conditions

Southeastern Louisiana contains a great variety of mammals, birds, reptiles, and amphibians. The proposed stockpile areas typically provide habitat for salamanders, toads, frogs, turtles, and several species of snakes; mammals such as nutria, muskrat, mink, otter, raccoon, white-tailed deer, skunks, rabbits, squirrels; and several species of migratory birds. However, wildlife would typically favor nearby forested and aquatic areas over the proposed stockpile areas, which are currently utilized as farmland. The proposed stockpile areas, like most of the region, also provide suitable breeding habitat for various species of mosquitoes.

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. Colonial nesting wading birds (including herons, egrets, and Ibis), seabirds/water-birds (including terns, gulls, black skimmers, and brown pelicans) and bald eagles have the potential to nest in the proposed project area. Any nesting birds and their nests would not be disturbed or destroyed. The CEMVN will provide additional information on bird species and known nesting sites to construction contractors, and will require that it be contacted if any nesting area within 650 feet of the construction zone would be disturbed.

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 will feed on other items such as 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. There are no known bald eagle's nests near the proposed stockpile areas. The CEMVN will provide additional information on bald eagles to construction contractors, and will require that it should be contacted if any bald eagle nesting area within 660 feet of the construction zone would be disturbed.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to wildlife or wildlife habitat at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur. The proposed sites would not be used as stockpile areas. Any potential direct impacts to wildlife and wildlife habitat would depend on the alternate uses to which landowners might dedicate this acreage.

Indirect Impacts

Under the no action alternative, no indirect impacts to wildlife or wildlife habitat at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur. The proposed sites would not be used as stockpile areas. Any potential direct impacts to wildlife and wildlife habitat would depend on the alternate uses to which landowners might dedicate this acreage.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to wildlife or wildlife habitat at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur. The proposed sites would not be used as stockpile areas. Any potential cumulative impacts to wildlife and wildlife habitat would depend on the alternate uses to which landowners might dedicate this acreage. Other activities in the vicinity have and will continue to change land use patterns, contributing to the cumulative loss of wildlife and wildlife habitat in the project area. Recent residential and commercial developmental pressures may contribute to a decline in remaining wildlife habitat in the vicinity.

The proposed River Road site is the only potential stockpile area in St. Charles Parish that is being investigated for use in construction of the HSDRRS. The proposed East St. John North and East St. John South sites are the only potential stockpile areas in St. John the Baptist Parish that are being investigated for use in construction of the HSDRRS. Wildlife and wildlife habitat could be cumulatively impacted in the region because of other HSDRRS activities, including, for example, the excavation of the approved 3C Riverside Phase 1 and Phase 2 contractor-furnished borrow areas (IER #23) and the approved 3C Riverside Phase 3 contractor-furnished borrow area (IER #32).

Wildlife habitat in the project area has historically been affected by residential, commercial, and industrial development. Land has been converted for residential, commercial, and industrial uses in a significant portion of leveed areas in the region. It is expected that this historical trend would continue to impact wildlife habitat in the region.

Proposed Action

- *All Sites*

Direct Impacts

Direct impacts to wildlife and wildlife habitat would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Material hauling and piling would disrupt and displace mobile wildlife and destroy non-mobile wildlife at the sites. Mobile wildlife would likely move to areas of similar habitat during the sites' use. Migratory birds that utilize the sites would likely not use them due to lack of suitable habitat, and construction-related noise.

After stockpiling concludes, all stockpiled material and construction equipment (trucks, excavators, silt fencing, etc.) would be removed, leaving only a fallow site. Any crops currently being farmed at the sites would not be replanted; the landowners could choose to do this, and if so, the sites would return to their original uses. Mobile wildlife species are expected to rehabilitate the sites. Any additional potential direct impacts to wildlife and wildlife habitat would depend

on what the landowners decide to do with the proposed sites after their use as stockpile areas.

Indirect Impacts

No indirect impacts to wildlife and wildlife habitat are expected to occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Any wildlife habitat outside of the proposed stockpile areas would be avoided. Wildlife habitat around the proposed stockpile areas would be expected to become a temporary haven for mobile and migratory wildlife during stockpiling activities

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas is not expected to contribute to the cumulative loss of wildlife and wildlife habitat in the region, as the land is currently used for agriculture and hay production, the impacts are temporary and the sites would be converted to their original condition. Any additional potential cumulative impacts to wildlife and wildlife habitat would depend on what the landowners decide to do with the proposed sites after their use as stockpile areas. Cumulative impacts to wildlife and wildlife habitat would continue in the project area and would be similar to those described for the No Action alternative.

3.2.6 Threatened and Endangered Species

Existing Conditions

Threatened and endangered species (T&E) are those recognized species that are protected in the United States through various laws, regulations, and conservation programs. The USFWS designates areas that have the physical and biological features that are essential to the conservation of T&E species or areas of habitat that are believed to be essential for a species' conservation as "critical habitat." Through this designation the USFWS is helping to manage the survival and proliferation of T&E species in the region. Although several Federal or state-listed T&E species are dependent on the habitat types present in the study area, no endangered, threatened, or candidate species under USFWS jurisdiction presently occur at the proposed River Road, East St. John North, or East St. John South stockpile areas, as described below. No critical habitat for any T&E species was found at any of the proposed stockpile areas.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

No direct impacts to T&E species or their critical habitat would occur under the no action alternative. The proposed River Road, East St. John North, and East St. John South stockpile areas would not be used as stockpile areas.

Indirect Impacts

No indirect impacts to T&E species or their critical habitat would occur under the no action alternative. The proposed River Road, East St. John North, and East St. John South stockpile areas would not be used as stockpile areas.

Cumulative Impacts

Under the no action alternative, there would be no cumulative impacts to T&E species or their critical habitat from the proposed action. The proposed River Road, East St. John North, and East St. John South stockpile areas would not be used as stockpile areas.

The region's T&E species depend on a variety of habitat that includes resources previously discussed in this IER, mainly jurisdictional wetlands and non-jurisdictional BLH. A discussion of the potential cumulative impacts to these resources can be found in, respectively, section 3.2.1 and section 3.2.2. As noted in those sections, no jurisdictional wetlands or non-jurisdictional BLH are present within the proposed sites.

Proposed Action

No listed endangered, threatened, or candidate species are known to exist at the proposed River Road, East St. John North, or East St. John South stockpile areas. The USFWS concurred with the CEMVN that use of the proposed stockpile areas is not likely to adversely affect T&E species or their critical habitat, as documented in correspondence included in appendix D (letters dated 22 January 2010).

- *All Sites*

Direct Impacts

No direct impacts to T&E species or their critical habitat would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas. The USFWS concurred with determinations that implementation of the proposed action would not adversely affect any T&E species or their critical habitat in their letters.

Indirect Impacts

No indirect impacts to T&E species or their critical habitat would occur with use of the proposed River Road, East St. John North, and East St. John South stockpile areas.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas would not contribute to the loss of T&E species or their critical habitat in the project area because the proposed sites do not contain any T&E species or critical habitat.

The region's T&E species depend on a variety of habitat that includes resources previously discussed in this IER, mainly jurisdictional wetlands and non-jurisdictional BLH. A discussion of the impacts to these resources can be found in, respectively, section 3.2.1 and section 3.2.2. Cumulative impacts to T&E species and wildlife habitat would continue in the project area.

3.2.7 Cultural Resources

Existing Conditions

The level of cultural resource investigations for each of the proposed stockpile areas depends on factors such as current and past land use, geomorphology, presence of known sites, and the probability of unknown sites located within the areas of potential effect (APE). This information is used to assess the likelihood that archaeological sites or historic structures could be affected by excavation or visual impacts of a proposed

project. When sites are present within the APE, the project area boundaries may be adjusted to avoid impacts to historic properties, or sites may be investigated further to determine if they are eligible for inclusion on the National Register of Historic Places (NRHP). Site identification (Phase I) cultural resource investigations were conducted for the three proposed stockpile areas.

Section 106 of the National Historic Preservation Act of 1966, as amended, requires consideration of cultural resources prior to a federal undertaking and requires consultation with the State Historic Preservation Officer (SHPO) and Federally recognized Indian Tribes that have an interest in the region, and in some cases the Advisory Council on Historic Preservation and other consulting parties. Only sites, buildings, structures, or objects determined eligible for, or listed on, the NRHP are afforded the safeguards of the National Historic Preservation Act. The results of these investigations and consultation reveal that with an APE adjustment to avoid one potentially significant historic property, no known sites eligible for, or listed on, the NRHP exist within the APE of each proposed stockpile area. Section 106 consultation for the proposed actions is concluded. However, if any unrecorded cultural resources are determined to exist within the proposed project boundaries, then no work will proceed in the area containing these cultural resources until a CEMVN archaeologist has been notified and supplemental coordination with the SHPO and Indian Tribes has been completed.

- *River Road*
A Phase I cultural resources investigation recorded one historic site (Site 16SC86), a part of Victoria Plantation, within the originally proposed boundaries of this proposed stockpile area. This site was determined to require further testing to determine if it was potentially eligible for the National Register of Historic Places (NRHP). As a result of this recommendation, the CEMVN redefined the proposed stockpile area to exclude the defined area of the historic site occurrence. The proposed stockpile boundaries were redrawn and placed outside of the farthest defined limits of the site. With this redefined proposed stockpile area, there would be no effect to cultural resources if stockpiling occurs.
- *East St. John North*
A Phase I cultural resources investigation located no cultural resources within the proposed area. No effect to cultural resources would occur if this proposed stockpile area is utilized.
- *East St. John South*
A Phase I cultural resources investigation recorded one archaeological site (16SJB66, a scatter of prehistoric and historic artifacts) and two isolated archaeological occurrences within the proposed stockpile area boundaries. Further testing indicated that these resources are not eligible for the NRHP, and no effect to cultural resources would occur if this proposed stockpile area is utilized. Avoidance of these resources is not necessary according to Section 106 of the National Historic Preservation Act.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to cultural resources at the proposed River Road, East St. John North, and East St. John South stockpile areas would be anticipated. Any undiscovered or unreported cultural resources or traditional cultural properties would remain intact and in their current state of preservation. The burial or subsidence of historic land surfaces would continue in the current pattern. All available information indicates that it is highly unlikely that under the No Action alternative there would be any direct impacts to cultural resources.

Indirect Impacts

Under the no action alternative, no indirect impacts to cultural resources at the proposed River Road, East St. John North, and East St. John South stockpile areas are anticipated.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to cultural resources at the proposed River Road, East St. John North, and East St. John South stockpile areas are anticipated. The proposed sites would not be used as stockpile areas.

Proposed Action

The results of resources investigations revealed that historic properties 16SC86 (River Road) and 16SJB66 (East St. John South) exist within the proposed boundaries of two of the proposed stockpile sites. Site 16SC86 is considered potentially eligible for the NHRP, and the proposed stockpile boundaries were redrawn to exclude this site from the proposed stockpile area. Site 16SJB88 is not a significant resource and use of the proposed East St. John stockpile area would have no effect on significant cultural resources.

- *All Sites*

Direct Impacts

All available information indicates that it is highly unlikely that cultural resources would be impacted by utilization of the proposed River Road, East St. John North, and East St. John South stockpile areas. With implementation of the proposed action, any undiscovered cultural resources may be damaged during stockpile operations. It is unlikely that such direct impacts would occur because cultural resource surveys have been completed in order to identify cultural resources within the proposed stockpile areas, and those surveys did not reveal the existence of any known historic properties that are eligible for the NRHP within the currently proposed stockpile boundaries. One site (16SC86) was recorded within the River Road stockpile area but will be avoided, and one site (16SJB66) and two isolated occurrences were recorded on the proposed East St. John South stockpile area, but testing revealed that these three loci are not eligible for the NRHP and have no cultural resources significance. The Louisiana State Historic Preservation Officer (SHPO) concurred with this finding of no cultural resources affected in a letter dated 11 December 2009 (appendix D). In addition, the Alabama Coushatta Tribe of Texas concurred with this finding (appendix D). Ten other Indian tribes were contacted, and no response was received by the CEMVN. No response implies concurrence with the CEMVN's finding of no cultural resources affected, as per 36 CFR 800.4(d).

Construction contractors are required to contact the CEMVN in the event that any apparent historical or archaeological properties are unearthed during use of the proposed stockpile areas. The items shall be carefully preserved, and the contractor shall leave the finds undisturbed. Excavation would be halted until the SHPO and Indian Tribes are notified.

Indirect Impacts

With implementation of the proposed action, no indirect impacts to cultural resources would be anticipated.

Cumulative Impacts

If the proposed stockpile sites are used, it is highly unlikely that any cumulative negative impacts to cultural resources would occur. Cultural resource surveys were completed for the proposed sites and did not reveal the existence of any known historic properties that are eligible for the NRHP within the currently proposed stockpile areas.

3.2.8 Recreational Resources

Existing Conditions

- *River Road*
The proposed stockpile area is privately owned and is not being used for recreation. There is a paved bicycle trail on the levee near the project site. The site is separated from this recreation feature by River Road/Highway 48. The bicycle trail is used by bicyclists as well as people walking the levee. A football field surrounded by a track and a baseball field are located approximately 1300 feet south of the project site.
- *East St. John North*
The project site is currently being used for harvesting hay and is not being used for recreation. East St. John High School's softball and baseball fields are located approximately 0.09 mile east of the project site. Belle Point Playground borders the high school to the east and provides playground equipment and picnic tables. It is located approximately 0.18 mile east of the project site.
- *East St. John South*
The proposed stockpile area currently contains a crop of sugar cane and is not being used for recreation. East St. John High School and Belle Point Playground are north of the project site. The site and the recreation features are separated by Airline Highway (US-61). There is a community pool located 0.44 mile west of the project area. Joe Kellen Memorial Field and East St. John Elementary are less than one mile southeast of the project and provide a football field, track, and stadium.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, the conditions within the recreational environment would continue as they have in the past and would be dictated by the natural land use patterns and processes that have dominated the area in the past.

Indirect Impacts

Under the no action alternative, the conditions within the recreational environment would continue as they have in the past and would be dictated by the natural land use patterns and processes that have dominated the area in the past.

Cumulative Impacts

Under the no action alternative, the conditions within the recreational environment would continue as they have in the past and would be dictated by the natural land use patterns and processes that have dominated the area in the past.

Proposed Action

- *All Sites*

Direct Impacts

Currently, there is no recreation use within the project area. There is the potential for the sight of construction equipment, dust, and noise to impact recreational activities near the project sites during hauling and stockpiling activities.

Indirect Impacts

There is the potential for the sight of construction equipment, dust, and noise to impact recreational activities near the project sites during hauling and stockpiling activities.

Cumulative Impacts

Authorized CEMVN projects such as the HSDRRS and New Orleans to Venice; as well as state and local levee projects will temporarily displace recreational uses such as walking, bicycling, fishing, boating, hunting, bird watching and wildlife viewing. Developed recreation sites such as ball fields, playgrounds, and picnic areas may be negatively affected by dust, noise, and the sight of equipment and construction activities.

Southeast Louisiana coastal restoration projects are also temporarily displacing hunting, fishing, boating, bird watching and wildlife viewing recreationists during construction activities. In the future, these projects will improve fish, wildlife, and bird habitat and provide recreation benefit for hunting, fishing, wildlife viewing and bird watching recreationists.

3.2.9 Noise Quality

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 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. Background sound levels for the proposed sites are discussed below.

- *River Road*
Noise levels at and surrounding the proposed River Road stockpile area are variable depending on the time of day and climatic conditions. In the vicinity of the site are farms, the Mississippi River, the Illinois Central Railroad to the east, and residential developments. The site is located east of River Road (100-foot distance), which is traveled by car and truck traffic that contribute to noise levels in the area. Most times of elevated noise levels associated with vehicular traffic (typically between 50 and 60 dBA at 100 feet) and train traffic (typically between 60 and 80 dBA at 100 feet) would be expected to be during daylight hours. Additionally, seasonal farming activities during certain times of the year, including the use of tractors, contribute to noise levels in the immediate vicinity. There are residential areas directly to the north and south of the site, each approximately 125 feet away. Noise associated with residential areas would be expected to come mostly from vehicular traffic.

Local farms and traffic on the Mississippi River are not expected to greatly contribute to noise levels in the vicinity.

- *East St. John North*
Noise levels at and surrounding the proposed East St. John North stockpile area are variable depending on the time of day and climatic conditions. In the vicinity of the site are undeveloped forest, farms, and some residential developments. The East St. John High School is located immediately adjacent and east of the site. The site is located on Airline Highway (US-61), a roadway that is traveled by car and truck traffic that contributes to noise levels in the area (50-foot distance). Additionally, seasonal farming activities during certain times of the year, including the use of tractors, contributes to noise levels in the immediate vicinity. Most times of elevated noise levels associated with traffic would be expected to be during daylight hours, especially during school hours.

Local farms and forested areas are not expected to greatly contribute to noise levels in the vicinity.

- *East St. John South*
Noise levels at and surrounding the proposed East St. John South stockpile area are variable depending on the time of day and climatic conditions. In the vicinity of the site are undeveloped forest, farms, and a residential development immediately to the east. The East St. John High School is located across Airline Highway (US-61), and is approximately 185 feet away. The site is located on Airline Highway (US-61), a roadway that is traveled by car and truck traffic that contribute to noise level in the area (50-foot distance). Additionally, seasonal

farming activities during certain times of the year, including the use of tractors, contributes to noise levels in the immediate vicinity. Most times of elevated noise levels associated with traffic would be expected to be during daylight hours, especially during school hours.

Local farms and forested areas are not expected to greatly contribute to noise levels in the vicinity.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, there would be no direct impacts to noise quality due to the proposed actions. The proposed River Road, East St. John North, and East St. John South sites would not be used as stockpile areas.

Sound levels within the immediate vicinities of the sites would remain unchanged from current conditions. The largest source of noise would continue to be vehicular traffic on nearby roads and seasonal farming activities, in addition to train noise at the River Road site. Any potential direct impacts to noise quality would depend on the alternate uses to which landowners might dedicate this acreage.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to noise quality due to the proposed actions. The proposed River Road, East St. John North, and East St. John South sites would not be used as stockpile areas. Any potential indirect impacts to noise quality would depend on the alternate uses to which landowners might dedicate this acreage.

Cumulative Impacts

Under the no action alternative, there would be no cumulative impacts to noise quality due to the proposed actions. The proposed River Road, East St. John North, and East St. John South sites would not be used as stockpile areas. Any potential cumulative impacts to noise quality would depend on the alternate uses to which landowners might dedicate this acreage.

Noise levels would be cumulatively impacted by existing and reasonably foreseeable activity in the vicinity of the proposed sites. Private construction activities would also incrementally impact noise levels in the area. Cumulative noise impacts related to the construction of the HSDRRS will be discussed in the CED.

Proposed Action

- *All Sites*

Direct Impacts

Under the proposed action, increased noise levels would occur during hauling and stockpiling activities. The noise would affect wildlife, causing them to avoid the area and return once construction ends. Residents of nearby residential areas and

students and staff at the East St. John High School would be impacted by noise associated with construction equipment such as bulldozers and dump trucks. Noise would also directly impact employees working at the proposed stockpile areas. Most instances of higher sound levels associated with moving of borrow material and truck hauling would be expected to be limited to the hours the sites are in use seven days a week. It is expected that these impacts would only occur while these sites are used for stockpiling from 2010 through 2012.

Table 3 describes possible noise emission levels for construction equipment expected to be used during the proposed stockpiling activities (FHWA, 2007). 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 (USEPA, 1974). Noise levels would decrease as distance from the noise source increases. For the equipment types that would be used at the proposed sites, a distance of approximately 400 feet from the source would be required to minimize sound levels to 65 dBA (table 3). The CEMVN determined that reducing the footprints of the proposed River Road, East St. John North, and East St. John South stockpile sites to increase the distance to 400 feet (for lesser sound impacts) between residences/ the East St. John High School and the stockpiling sites would render the sites too small to use. Reducing the size of the sites to some lesser degree that would somewhat mitigate the noise impacts to nearby residents and students and staff at the high school would make the sites less desirable for stockpiling activities.

Table 3: Possible Construction Equipment Noise Emission

Noise Source	Typical Noise Level (dBA) of Construction Equipment and Modeled Attenuation at Various Distances				
	50 feet	100 feet	200 feet	500 feet	1000 feet
Dozer	82	76	70	62	56
Dump Truck	76	70	64	56	50

(The dBA at 50 feet is a measured noise emission. All other results are modeled estimates.)

Source: FHWA 2007.

Residences near the River Road site, approximately 125 feet away from the proposed site, could potentially be exposed to noise levels greater than 70 dBA. Those residents living closest to River Road may currently experience noise levels from traffic at around 60 dBA while residents living closest to the Illinois Central Railroad may currently be exposed to noise from trains at approximately 80 dBA.

Residences located immediately adjacent to the East St. John South site could potentially be exposed to noise levels around 80 dBA.

Students and staff at the East St. John High School, which is immediately adjacent to the East St. John North site, could potentially be exposed to noise levels at around 80 dBA. However, most classroom activity would occur indoors, where the sound level could be decreased by 10 dBA.

A DNL of 55 dBA was identified by USEPA as a level below which there is no adverse impact (USEPA, 1974). Residents northeast of the East St. John North site and recreational users of the Belle Point Playground would be far enough

away from proposed stockpiling activities as to not be adversely impacted by the proposed action.

Areas exposed to a DNL above 65 dBA are generally not considered suitable for residential use. Residences near the River Road and East St. John South sites, and students and staff at the East St. John High School may be exposed to such elevated noise levels due to the proposed action and may experience associated adverse effects such as disturbance, annoyance and distraction. Stockpiling and hauling activity could be limited to daylight hours (10 hours to 14 hours per day) seven days a week depending on construction schedules, weather conditions, and project borrow needs. The CEMVN recognizes the potential adverse noise impacts associated with the proposed action and has determined that reducing the footprints of the proposed River Road, East St. John North, and East St. John South stockpile sites to increase the distance to 400 feet (for lesser sound impacts) between residences/ the East St. John High School and the stockpiling sites would render the sites too small to use. Reducing the site footprints to some lesser extent would make the sites less desirable for use. Other potential noise mitigation measures such as reducing the number of hours the sites are used and/or mobile sound barriers would not be implemented. Residents of nearby residential areas and students at the East St. John High School would be impacted by elevated noise due to these activities. Actual noise impacts depend on construction schedules, which are dependant on weather conditions and project borrow needs, which are not known at this time. Additional potential direct impacts to sound levels would depend on what the landowners decide to do with the sites following their use.

Indirect Impacts

The indirect effects to noise from the transportation of material and personnel for the construction of the project features would have temporary indirect impacts to noise quality in the immediate vicinities of the sites. Noise levels around the stockpile sites and construction (levee) sites would be temporarily impacted by transportation activities needed to move equipment and materials to and from the sites, but these impacts would last only through the construction period. Any potential indirect impacts to noise quality would depend on what the landowners decide to do with the proposed stockpile areas following their use.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas could temporarily contribute to cumulative impacts on noise levels in the vicinity of the proposed sites. Hauling of borrow material would add to existing traffic and its related noise in the vicinity. Most times of elevated noise levels associated with traffic would be expected to be during construction hours. Private construction activities would incrementally impact noise levels in the project area. Any additional potential cumulative impacts to noise quality would depend on what the landowners decide to do with the proposed stockpile areas following their use.

Cumulative noise impacts will be further discussed in the CED.

3.2.10 Air Quality

Existing Conditions

Under the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for seven pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur

dioxide (SO₂), lead (Pb), ozone (O₃), particulate matter less than 10 microns in diameter (PM₁₀), and particulate matter less than 2.5 microns in diameter (PM_{2.5}). The NAAQS standards include primary and secondary standards. The primary standards were established at levels sufficient to protect public health with an adequate margin of safety. The secondary standards were established to protect the public welfare from the adverse effects associated with pollutants in the ambient air. The primary and secondary standards are presented in table 4.

Table 4: National Ambient Air Quality Standards

Pollutant and Averaging Time	Primary Standard		Secondary Standard	
	µg/m ³	parts per million (ppm)	µg/m ³	ppm
CO				
8-hour concentration	10,000 ¹	9 ¹	N/A	N/A
1-hour concentration	40,000 ¹	35 ¹		
NO ₂				
Annual arithmetic mean	100	0.053	same as primary standard	
SO ₂				
Annual arithmetic mean	80	0.03	-	-
24-hour concentration	365 ¹	0.14 ¹	-	-
3-hour concentration	-	-	1300 ¹	0.50 ¹
Pb				
Quarterly arithmetic mean	1.5	-	same as primary standard	
O ₃				
8-hour concentration	157	0.08 ²	same as primary standard	
PM ₁₀				
24-hour maximum	150 ¹	-	same as primary standard	
PM _{2.5}				
Annual arithmetic mean	15 ³	-	same as primary standard	
24-hour maximum	35 ⁴	-		

¹ Not to be exceeded more than once per year.

² 3-year average of the 4th highest daily maximum 8-hour concentration may not exceed 0.08 ppm.

³ Based on 3-year average of annual averages.

⁴ Based on 3-year average of annual 98th percentile values.

Source: 40 CFR 50

Areas that meet the NAAQS for a criteria pollutant are designated as being “in attainment;” areas where a criteria pollutant level exceeds the NAAQS are designated as being “in non attainment.” St. Charles and St. John the Baptist Parishes are currently in attainment of all NAAQS (USEPA, 2006).

Discussion of Impacts

No Action

- All Sites

Direct Impacts

Under the no action alternative, no direct impacts to air quality at the proposed River Road, East St. John North, and East St. John South stockpile areas would

occur from the proposed action. The proposed sites would not be used as stockpile areas.

It is assumed that farming activities would continue at the sites, from which dust would be generated and may affect nearby residents, and students and staff at the East St. John High School. Any potential direct impacts to air quality would depend on the alternate uses to which landowners might dedicate this acreage.

Indirect Impacts

Under the no action alternative, no indirect impacts to air quality at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur from the proposed action. The proposed sites would not be used as stockpile areas. Any potential indirect impacts to air quality would depend on the alternate uses to which landowners might dedicate this acreage.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to air quality at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur from the proposed action. The proposed sites would not be used as stockpile areas. Any potential cumulative impacts to air quality would depend on the alternate uses to which landowners might dedicate this acreage.

Other activities in the vicinity have and will continue to affect air quality in the project area. Air quality in the project area has historically been affected by residential, commercial, and industrial development. Most of these actions would be associated with emissions from vehicular traffic on local roads and residential energy emissions. It is expected that this historical trend would continue to impact air quality in the region.

Cumulative impacts to air quality will be further discussed in the CED.

Proposed Action

- *All Sites*

Direct Impacts

During stockpiling and hauling activities at the proposed River Road, East St. John North, and East St. John South stockpile areas, a temporary increase in air emissions would be expected in the project vicinities. Major emissions could include exhaust emissions from operations of diesel dump trucks, various types of construction equipment (e.g., bulldozers), and fugitive dust due to stockpiling.

The principal air quality concern associated with use of the proposed stockpile areas would be emission of fugitive dust near construction areas. The CEMVN would require construction contractors to use BMPs, such as having water trucks hose down fugitive dust with water, to control dust although such practices would not be expected to eliminate all fugitive dust emissions. The impacts to nearby residents may include inconvenience or annoyance caused by dust settling on their property and interfering with their enjoyment of outdoor activities. Those with respiratory illness and/or sensitivity to dust may experience adverse health impacts. The on-road trucks and private vehicles used to access the work area would also contribute to air pollution in the project vicinity when traveling along local roads and highways. Most instances of diminished air quality associated with borrow material movement and truck hauling would be expected to be

limited to the hours the sites are in use seven days a week. It is expected that these impacts would only occur while these sites are used for stockpiling from 2010 through 2012. Additional potential direct impacts to air quality would depend on what the landowners decide to do with the sites following their use.

Fugitive dust levels decrease as distance from the construction source increases. The CEMVN determined that reducing the footprints of the proposed River Road, East St. John North, and East St. John South stockpile sites to increase the distance between residences / the East St. John High School and the sites- and thus potentially decrease dust levels- would render them undesirable for stockpiling activities.

Any additional potential direct impacts to air quality would depend on what the landowners decide to do with the proposed stockpile areas following their use.

Indirect Impacts

Indirect impacts related to truck and diesel equipment emissions to air quality would be expected due to use of the proposed River Road, East St. John North, and East St. John South stockpile areas. Any additional potential indirect impacts to air quality would depend on what the landowners decide to do with the sites following their use.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas would temporarily contribute to air quality impacts in the project area during usage. These impacts should not have permanent cumulative impacts on air quality. Potential cumulative impacts to air quality would depend on what the landowners decide to do with the sites following their use.

Other activities in the vicinity have and will continue to affect air quality in the project area. Air quality in the project area has historically been affected by residential, commercial, and industrial development. Most of these actions would be associated with emissions from vehicular traffic on local roads and residential energy emissions. It is expected that this historical trend would continue to impact air quality in the region.

Cumulative impacts to air quality will be further discussed in the CED.

3.2.11 Water Quality

Existing Conditions

The Louisiana Department of Environmental Quality (LADEQ) regulates both point and nonpoint source pollution. The proposed River Road, East St. John North, and East St. John South stockpile areas have associated drainage features (e.g., farm drainage ditches) located within them. A farm canal is located on the southern border of the East St. John South site, and drains to the east and west into connecting canals.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to water quality at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur from the proposed action. The proposed sites would not be used as stockpile areas. Any potential direct impacts to water quality would depend on the alternate uses to which landowners might dedicate this acreage.

Indirect Impacts

Under the no action alternative, no indirect impacts to water quality at the proposed River Road, East St. John North, and East St. John South stockpile areas would occur from the proposed action. The proposed sites would not be used as stockpile areas. Any potential indirect impacts to water quality would depend on the alternate uses to which landowners might dedicate this acreage.

Cumulative Impacts

Under the no action alternative, there would be no cumulative decreases in water quality from the proposed action. The proposed sites would not be used as stockpile areas. Any potential cumulative impacts to water quality would depend on the alternate uses to which landowners might dedicate this acreage.

Other activities in the vicinity have and will continue to affect water quality in the project area. Cumulative impacts to water quality would continue in the project area under this alternative. Water quality in the project area has historically been affected by residential, commercial, and industrial development. Major contributors to decreases in water quality in the region include urban stormwater runoff, pollutants, sediment loading/runoff, nutrient loading, and dry weather flows. It is expected that this historical trend would continue to impact water quality in the region.

Proposed Action

- *All Sites*

Direct Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas could result in some temporary direct water quality impacts from disturbances to water quality in the immediate vicinity of the construction areas. Rain events would likely disperse stockpiled material, causing surface water turbidity in the immediate vicinity. Silt fencing would be installed by CEMVN contractors, and would mitigate for sediment travel off the site. In addition, fugitive dust would be hosed down with water, which would keep airborne particles mostly on-site. It is expected that some sediment would get around the silt fencing during high rain events, causing surface water turbidity in the immediate vicinity, including into the farm canal to the south of the East St. John South site. These impacts would be localized and temporary.

Any additional potential direct impacts to water quality would depend on what the landowners decide to do with the proposed stockpile areas following their use.

Indirect Impacts

No indirect impacts to water quality at the proposed River Road, East St. John North, and East St. John South stockpile areas are likely to occur from the proposed action. Any additional potential indirect impacts to water quality would depend on what the landowners decide to do with the proposed stockpile areas following their use.

Cumulative Impacts

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas would temporarily contribute to water quality impacts in the project area during usage. These impacts should not have permanent cumulative impact on water quality.

Other activities in the vicinity have and will continue to affect water quality in the project area. Water quality in the project area has historically been affected by residential, commercial, and industrial development. Major contributors to decreases in water quality in the region include urban stormwater runoff, pollutants, sediment loading/runoff, nutrient loading, and dry weather flows. It is expected that this historical trend would continue to impact water quality in the region.

3.2.12 Aesthetic (Visual) Resources

Existing Conditions

The proposed project sites have no technical or institutional significant visual resources according to USACE criteria. Public significance is undetermined.

- *River Road*
The proposed stockpile area's landscape's visual character is derived from its agricultural and residential setting. The terrain is relatively flat and has few topographical features other than well distinguished irrigation channels and some small drainage canals. Its landscape is populated with trees along field edges, roadways and drainage canals. There is also a densely populated stand of trees outside the southeast corner of the proposed stockpile area, which would not be impacted by stockpiling activities. Adjacent land uses include residential areas to the south and north and transportation corridors including River Road, Hwy 48 to the west, and a railroad line to the east. View sheds to the proposed stockpile area are from River Road and the residential areas.
- *East St John North*
The proposed stockpile area's landscape's visual character is derived from its mostly agricultural setting. Its landscape is populated with trees along field edges and property lines to the west and northeast. The terrain is relatively flat and has few topographical features other than well distinguished irrigation channels and some small drainage canals. View sheds to the proposed stockpile area are from Airline Highway (US-61), which is located to the south of the proposed area and the East St. John High School, which is located to the east.
- *East St. John South*
The proposed borrow area visually is similar to the East St John North site. View sheds to the proposed stockpile area are from the Airline Highway (US-61), and East St. John High School, which are both located to the north.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, no direct impacts to visual resources would occur at the proposed stockpile areas. The proposed sites would not be used as stockpile areas. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices. The landowners could directly impact aesthetic quality at the sites; however, this would not be related to the proposed action.

Indirect Impacts

Under the no action alternative, no indirect impacts to visual resources would occur at the proposed stockpile areas. The proposed sites would not be used as stockpile areas. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices. What the landowners choose to do with the properties may have long lasting effects on the surrounding, adjacent areas.

Cumulative Impacts

Under the no action alternative, no cumulative impacts to visual resources would occur at the proposed stockpile areas. The proposed sites would not be used as stockpile areas. Visual resources would most likely evolve from existing conditions in a natural process, or change as dictated by future land use maintenance practices.

Proposed Action

- *River Road*

Direct Impacts

The proposed action at the River Road site would have minimal direct impacts to the project area's landscape's visual character. The proposed sites have no institutional or technical visual resource significance. The River Road site provides some vegetative screening, depending on the location of the stockpiled material, from the adjacent residential areas. The 20-foot high piles of material would be at the sites temporarily, and once the material is removed, the site would return to pre-stockpile conditions. All stockpiled material and construction equipment (trucks, excavators, silt fencing, etc.) would be removed, leaving only a fallow site. Any crops currently being farmed at the sites would not be replanted; the landowner could choose to do this, and if so, the site would return to its original use.

Indirect Impacts

The proposed action at the River Road site would have temporary indirect impacts to the visual character of the adjacent areas. The stockpiling process would result in construction traffic along River Road that, depending on the frequency and duration, may be considered a visually distressing introduction into the adjacent residential areas located in the vicinity. Nevertheless, the stockpiling process would be temporary and once the material is removed, the adjacent area's visual character would most likely return to pre-stockpile conditions.

Cumulative Impacts

The proposed action at the proposed River Road site would have no foreseen cumulative impacts to visual resources.

- *East St. John North & East St. John South*

Direct Impacts

The proposed action at the East St. John North & East St. John South sites would have minimal direct impacts to the project area's landscape's visual character. The proposed sites have no institutional or technical visual resource significance. The 20-foot high piles of material would be at the sites temporarily, and once the material is removed the sites would return to pre-stockpile conditions.

Indirect Impacts

The proposed action at the East St. John North & East St. John South sites would have temporary indirect impacts to the visual character of the adjacent areas. The stockpiling process would result in construction traffic along Airline Highway (US-61) that depending on the frequency and duration, may be considered a visually distressing introduction into the adjacent East St. John High School and residential areas located in the vicinity. Nevertheless, the stockpiling process would be temporary and once the material is removed the adjacent areas' visual character would most likely return to pre-stockpile conditions.

Cumulative Impacts

The proposed action at the proposed East St. John North & East St. John South sites would have no foreseen cumulative impacts to visual resources.

3.3 SOCIOECONOMIC RESOURCES

The focus of this section is to evaluate the relative socioeconomic impacts of stockpiling activities at the proposed River Road, East St. John North, and East St. John South sites in the vicinity of the New Orleans metropolitan area. This borrow material would be used to construct proposed HSDRRS projects.

As previously stated, the purpose of the NEPA Emergency Alternative Arrangements (40 CFR 1506.11) is to expeditiously complete environmental analyses of impacts arising from HSDRRS efforts by allowing decisions on smaller groups of proposed actions to move forward sooner than under the traditional NEPA process (72 F.R. 1137). Because of the exigency of the Emergency Alternative Arrangements and the need to complete the HSDRRS, each IER can identify areas where data is incomplete, unavailable, as well as areas of potential controversy (72 F.R. 11339). Therefore, it is expected that earlier IERs will not contain the same amount of information, data and analyses as later IERs. The analysis contained in each IER builds off of the analysis contained in previous IERs. As information becomes available, more detailed analysis is successively presented in the IERs. Ultimately, at the conclusion of the IER process, the full cumulative effects analysis will be presented in the CED (Emergency Alternative Arrangements, page 10). This is why IER #24 may contain additional information, data or analyses not contained in earlier IERs.

3.3.1 Population and Housing

Existing Conditions

- *East St. John North*
The proposed St. John North stockpile area is located in St. John the Baptist Parish, near the town of LaPlace, Louisiana. While the proposed stockpile area itself is unpopulated, it is located next to a public high school and near a residential subdivision. The proposed stockpile area is 35 acres and located in

census tract 705, block group 1, block 1004. It was previously used for agriculture. Its current use is hay farming. There are two subdivisions in the area and one in the immediate vicinity of the proposed stockpile area. According to the U.S. Census, in 2000 this area (census block) had a population of 0 and 0 housing units. The U.S. Census tract has a population of 5,461 and 1,815 housing units. Preliminary 2010 Census data will be available in 2011 at the earliest.

- *East St. John South*

The proposed St. John South stockpile area is located in St. John the Baptist Parish, near the town of LaPlace, Louisiana. While the proposed stockpile area is unpopulated, it is located across Airline Highway (US-61) from a public high school and is adjacent to a residential subdivision. The proposed stockpile area is 65 acres and is located in census tract 705, block group 1, block 1004. It was previously used for agriculture. Its current use is sugarcane farming. There are two subdivisions in the area and one in the immediate vicinity of the proposed stockpile area. According to the U.S. Census, in 2000 this area (census block) had a population of 0 and 0 housing units. The U.S. Census tract has a population of 5,461 and 1,815 housing units. Preliminary 2010 Census data will be available in 2011 at the earliest.

- *River Road*

The proposed River Road stockpile area is located in St. Charles Parish, Louisiana, near the town of Ormond, Louisiana. There are residential and commercial structures in the area along River Road (LA-48), on either side of the site. The proposed stockpile area is 42 acres and is located in census tract 623.02, block group 1, block 1000. It was previously and is currently used for agriculture (hay farming). According to the U.S. Census, in 2000 this area (census block) had a population of 218 and 89 housing units. The U.S. Census tract has a population of 5,099 and 1,693 housing units. Preliminary 2010 Census data will be available in 2011 at the earliest.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

There would be no direct impacts to population and housing around the proposed stockpile areas under the no action alternative.

Indirect Impacts

There would be no indirect impacts to population and housing around the proposed stockpile areas under the no action alternative.

Cumulative Impacts

There would be no cumulative impacts to population and housing around the proposed stockpile areas under the no action alternative. Cumulative indirect impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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 job creation may manifest itself in either in-migration to the area or an increase in commuting activity. This impact is not specific to the proposed East St. John North and East St. John South stockpile areas, since they lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

Under the proposed action, borrow material would be stored within the proposed stockpile areas for use within the HSDRRS. There may be temporary (between the years 2010 and 2012), construction-related impacts to residents in the immediate vicinity of the proposed stockpile areas, as well as on Airline Highway (US-61) and River Road (LA-48) and Van's Lane. These may include increased noise levels, degraded air quality, and increased congestion on neighborhood roadways. Traffic congestion in these areas could also negatively affect public safety. Congestion impacts are discussed further in the transportation section. The borrow piles may pose a hazard to children from the surrounding areas, who may be tempted to play within them. To mitigate this potential hazard, the CEMVN would install fencing and appropriate signage around the sites. Nearby residents may experience adverse impacts due to increased noise and dust. Housing in the area may become less desirable. Rental units near the sites may experience decreased occupancy. Single family homes may become more difficult to sell. Fencing could be added around the sites when they are in use to secure them. Crews could work between 10 and 14 hours a day or more, 7 days a week, given the urgency of the task of completing the HSDRRS. The duration of construction is dependent on work schedules, weather conditions, and exact borrow need, none of which are known at this time.

Indirect Impacts

No indirect impacts related to displacement of population and housing are expected to occur under the proposed action.

Cumulative Impacts

Borrow storage at the proposed stockpile areas could temporarily contribute to cumulative population and housing impacts in the project vicinity. Nearby residents may experience temporary, construction-related impacts such as degraded air quality, increased noise, and increased congestion on neighboring roadways. All impacts would only last through the storage period.

Positive cumulative impacts to population and housing associated with completion of the HSDRRS in its entirety may also occur, at least with respect to the River Road site, which is within the HSDRRS. The lower flood risk that accrues to 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 activity. Population and housing in the East St. John North and East St. John South stockpile areas, which lie outside the HSDRRS, would not be expected to be impacted by the potential benefits accruing to areas within the system.

3.3.2 Impacts to Employment, Business, and Industry

Existing Conditions

- *East St. John North*
The proposed site is currently used for agricultural purposes generating minimal employment. The site is used for hay farming. The project site totals 35 acres not within proximity to urban developments of the New Orleans MSA.
- *East St. John South*
The proposed site is currently used for agricultural purposes generating minimal employment. The site is used to grow sugar cane. The project site totals 65 acres not within proximity to urban developments of the New Orleans MSA.
- *River Road*
The proposed site is currently used for agricultural purposes generating minimal employment. The site is used to grow hay. The project site totals almost 60 acres within close proximity to urban developments of the New Orleans MSA.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

There would be no direct impacts to employment, business, and industry in the vicinity of the proposed stockpile areas under the no action alternative.

Indirect Impacts

There would be no indirect impacts to employment, business, and industry in the vicinity of the proposed stockpile areas under the no action alternative.

Cumulative Impacts

Under the no action alternative, the proposed stockpile areas would not be used as a stockpile area and would not contribute to cumulative impacts to employment, business and industry in the project area.

Under the no action alternative, cumulative indirect impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since these proposed stockpile areas lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

As a result of the proposed action, the proposed stockpile areas would not be available for alternative, business-related uses until the stored borrow is removed.

Temporary (from 2010 to 2012) impacts may occur to area businesses due to delays and avoidance caused by increased traffic congestion.

Using the site as a borrow storage area could have no significant effect on employment. Minimal agricultural losses, if any, could be offset by minimal employment gains from the transportation and storage of the borrow.

Indirect Impacts

Minimal indirect impacts to business, such as delay in further business development in the area due to traffic congestion, are expected as a result of the proposed action. However, these impacts are expected to be temporary and negligible.

Cumulative Impacts

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 accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South stockpile areas, since they lie outside the HSDRRS.

3.3.3 Availability of Public Facilities and Services

Existing Conditions

- *East St. John North and East St. John South*
There is a public high school in the vicinity of the proposed stockpile areas.
- *River Road*
There are no public facilities in the vicinity of the proposed stockpile area.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

There would be no direct impacts to the availability of public facilities and services under the no action alternative.

Indirect Impacts

There would be no indirect impacts to the availability of public facilities and services under the no action alternative.

Cumulative Impacts

Cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South stockpile areas, which are outside the HSDRRS.

Proposed Action

- *East St. John North and East St. John South*

Direct Impacts

There may be significant temporary, construction-related impacts to public facilities and services in the immediate vicinity of the proposed East St. John North and East St. John South stockpile areas, especially with respect to the East St. John High School, which is immediately adjacent to the East St. John North site. These may include increased noise levels, degraded air quality, dust and increased congestion on area roadways. Students and staff at the high school may experience inconvenience and disturbance from the stockpiling and hauling activity. Crews could work between 10 and 14 hours a day or more, 7 days a week, given the urgency of the task of completing the HSDRRS. The duration of construction is dependent on work schedules, weather conditions, and borrow need, none of which are known at this time.

Indirect Impacts

There would be no indirect impacts to public facilities and services under the proposed action.

Cumulative Impacts

No cumulative impacts to public facilities and services in the East St. John North and East St. John South stockpile areas would be anticipated with the proposed action.

- *River Road*

Direct Impacts

There would be no direct impacts to public facilities and services under the proposed action, since there are no public facilities or services in the immediate vicinity of the proposed stockpile area.

Indirect Impacts

There would be no indirect impacts to public facilities and services under the proposed action.

Cumulative Impacts

Under the proposed action alternative, cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is specific to the proposed project area, because it lies inside the HSDRRS.

3.3.4 Effects on Transportation

The CEMVN is currently developing information for an analysis of the transportation impacts associated with the HSDRRS project. A transportation report is being developed and will be released publicly once it is completed. Estimates on numbers of truckloads necessary to complete the HSDRRS borrow mission are provided in this section. These estimates were developed as a part of CEMVN's continuing analysis of the potential transportation impacts associated with the HSDRRS mission.

Existing Conditions

- *East St. John North and East St. John South*
The sites are located on Airline Highway (US-61). Access to the sites would be provided from Airline Highway. It would not be provided from any residential streets. The route would be from Bonnet Carré to the sites via Airline Highway, LA-61 and other major roads. Access to the East St. John North and East St. John sites would be at the western portion of the sites, approximately 700 feet from the East St. John High School (figure 5).
- *River Road*
The River Road site is located on River Road (LA-48). Access to the site would be provided from LA-48. It would not be provided from any residential streets. The route to the site from Bonnet Carré would be via LA-48 and other major roads. Access to the River Road site would be at the portion of the site fronting LA-48, approximately 125 feet from Vans Lane (figure 6).

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative there would be no direct impacts to transportation in the vicinity of the proposed stockpile areas.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to transportation in the vicinity of the proposed stockpile areas.

Cumulative Impacts

Under the no action alternative, the proposed sites would not be used as a stockpile areas, and thus would not contribute to cumulative transportation impacts in the project area.

Congestion impacts to the greater metropolitan area are likely to be moderate to severe as a result of HSDRRS construction. Decreases in levels of service on local

roads are likely due to the high number of truck trips required to transport the required amounts of construction material. Additionally, there is a higher risk of traffic accidents and resulting damage to property as a result of the higher number of truck trips occurring on major transportation arteries within the metropolitan area.

There is also likely to be moderate to severe degradation of infrastructure as a result of wear and tear from transporting HSDRRS construction materials. These impacts are likely to occur on local and feeder roads, as well as on local bridges. As a result of HSDRRS construction, rehabilitation to area infrastructure will likely be required sooner than would normally be expected.

On the other hand, there may emerge cumulative indirect impacts associated with the completion of the HSDRRS in its entirety. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since these proposed stockpile areas lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

Under the proposed action, there may be significant temporary, congestion-related impacts to roads in the vicinity of the proposed stockpile areas. This may include the stretch of road along Airline Highway (US-61) between the Bonnet Carré Spillway and the East St. John sites, and along River Road (LA-48), between the Bonnet Carré Spillway and the River Road site. Congestion impacts and decreases in levels of service around the proposed stockpile areas would likely be moderate to severe. The CEMVN estimates that 420,000 cubic yards of material could be stored in 2010, the equal of 35,000 truckloads. In 2011, there could be about 340,000 cubic yards stored, hauled by about 28,300 truckloads. In 2012, there could be about 100,000 cubic yards stored, equal of 8,300 truckloads. Due to the increased levels of truck traffic, and the movement of many truckloads of material, there will likely be increased wear and tear on these roads. Due to frequent heavy loads, local roadways around the project area will likely suffer degradation requiring rehabilitation that is sooner than would normally be expected. Lastly, because of increased levels of truck traffic, there could be a higher risk of accidents, with resulting delays, injuries, fatalities, and damage to property.

Indirect Impacts

There would be increased congestion, decreased levels of service, accelerated wear and tear, and increased risk of traffic accidents on other major and local roads in the project area and throughout the Greater New Orleans area as borrow and other construction materials are transported to construction sites for use within the HSDRRS.

Cumulative Impacts

Approximately 71,000 truckloads could be hauled to complete borrow storage in

the proposed stockpile areas. The addition of approximately 71,000 truckloads contributes to the cumulative transportation impacts in the HSDRRS project area.

It is estimated that it could require approximately 2,000,000 truckloads to complete excavation of the borrow areas needed for completion of the HSDRRS. If the proposed sites are used as stockpile areas for completion of the HSDRRS, it could account for approximately 4 percent of the total amount of truckloads required to complete the HSDRRS borrow mission.

Congestion impacts to the greater metropolitan area are likely to be moderate to severe as a result of HSDRRS construction. Decreases in levels of service on local roads are likely as a result of the high number of truck trips required to transport the required amounts of construction material. Additionally, there is a higher risk of traffic accidents and resulting damage to property as a result of the higher number of truck trips occurring on major transportation arteries within the metropolitan area.

There is also likely to be moderate to severe degradation of infrastructure as a result of wear and tear from transporting HSDRRS construction materials. These impacts are likely to occur on local and feeder roads, as well as on local bridges. As a result of HSDRRS construction, rehabilitation to area infrastructure will likely be required sooner than would normally be expected.

On the other hand, there may emerge cumulative indirect impacts associated with the completion of the HSDRRS in its entirety. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since they lie outside the HSDRRS.

3.3.5 Disruption of Community and Regional Growth

Existing Conditions

- *East St. John North and East St. John South*
Community and regional growth are generally influenced by national trends, but otherwise depend significantly upon relatively local attributes that allow it to be evaluated apart from the national economy. For the purposes of socioeconomic impact analysis, the project area is first described in summary terms with respect to prevailing trends in the growth of population, housing, income, and employment. Against this baseline, the relative effects of the proposed and alternative actions are evaluated.

According to U.S. Census data from 2000 and 2008 the following trends were observed in St John the Baptist Parish: population grew from 43,044 to 46,994, and median household income grew from \$39,456 in 2000 to \$47,992 in 2008. Between 2001 and 2007, employment increased from 16,565 to 20,346.

- *River Road*
Community and regional growth are generally influenced by national trends, but otherwise depend significantly upon relatively local attributes that allow it to be

evaluated apart from the national economy. For the purposes of socioeconomic impact analysis, the project area is first described in summary terms with respect to prevailing trends in the growth of population, housing, income, and employment. Against this baseline, the relative effects of the proposed and alternative actions are evaluated.

According to U.S. Census data from 2000 and 2008 the following trends were observed in St. Charles Parish: population increased from 48,072 to 51,547. Median household income increased from \$45,139 in 2000 to \$60,876 in 2008. Between 2001 and 2007, employment increased from 24,327 to 30,058.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, there would be no direct impacts to community and regional growth in the vicinities of the proposed stockpile areas.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to community and regional growth in the vicinities of the proposed stockpile areas.

Cumulative Impacts

Under the no action alternative, borrow material in the required amount would be used from in other locations in order that the HSDRRS is completed.

There would be cumulative impacts associated with the completion of the HSDRRS in its entirety. The lower flood risk that accrues to 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. In addition, the lower incidence of flooding that the HSDRRS is designed to achieve would reduce the propensity for disruption of community life. This impact is not applicable to the proposed project areas, since the proposed East St. John North and East St. John South stockpile areas lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

As a result of the proposed action, land at the proposed stockpile areas would not be available for future alternative uses normally associated with economic development until the stored borrow is removed from the sites. This could have a negative impact on community growth while the borrow is stored. There are no known imminent uses for the stockpile areas such that would preclude community and regional growth.

Indirect Impacts

No indirect impact to future community and regional growth is expected because the sites will be cleared of stockpiling materials and equipment at the end of their use; the sites will then be available for other uses.

Cumulative Impacts

Under the proposed action, the proposed sites could be used as stockpile areas and could contribute to cumulative impacts on community growth. The proposed stockpile areas would be unavailable for further development until the CEMVN removes the borrow. Using land for borrow storage purposes prevents it from being used for alternative, more productive purposes until the borrow material is removed.

There would be cumulative impacts associated with the completion of the HSDRRS in its entirety. The lower flood risk that accrues to 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. In addition, the lower incidence of flooding that the HSDRRS is designed to achieve would reduce the propensity for disruption of community life. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since they lie outside the HSDRRS.

3.3.6 Impacts to Tax Revenues and Property Values

Existing Conditions

- *East St. John North and East St. John South*
The proposed East St. John stockpile areas are located in census tract 705, group 1, where the median value for owner-occupied houses was \$143,100 in 2008.
- *River Road*
The proposed River Road stockpile area is located in census tract 623.02, group 1, where the median value for owner-occupied houses was \$163,300 in 2008.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, there would be no direct impacts to tax revenues and property values in the vicinity of the proposed stockpile areas.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to tax revenues and property values in the vicinity of the proposed stockpile areas.

Cumulative Impacts

The proposed sites would not be used as stockpile areas and would not contribute to cumulative tax revenue and property value impacts in the project area.

Under the no action alternative, cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that

accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since these stockpile areas lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

Property values for the stockpile areas may decrease as its potential for use for alternative purposes are diminished in the future until the CEMVN removes the borrow material from the site. For adjacent properties, during the duration of storage, the market response with respect to property values is likely to be negative.

Indirect Impacts

Tax revenues for St. John the Baptist and St. Charles Parishes may marginally decrease as a result of the proposed action. Property value for the site would likely be temporarily lower due to borrow storage instead of the site being used for more productive purposes that would generate greater tax revenue.

Cumulative Impacts

Under the proposed action, the CEMVN will leave the sites in their original condition after use.

For adjacent properties, the market response with respect to property values is likely to be negative during the pendency of this action.

Cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since they lie outside the HSDRRS.

3.3.7 Changes in Community Cohesion

Existing Conditions

- *All Sites*

Community cohesion refers to the common vision and sense of belonging within a community that is created and sustained by the extensive development of individual relationships that are social, economic, cultural, and historical in nature. The degree to which these relationships are facilitated and made effective is contingent upon the physical and spatial configuration of the community itself,

the functionality of the community owes much to the physical landscape within which it is set. The viability of community cohesion is compromised to the extent to which these physical features are exposed to interference from outside sources.

The areas of the proposed action are currently within a settled community with a stable complement of churches, schools, businesses, and community interaction.

Discussion of Impacts

No Action

- *All Sites*

Direct Impacts

Under the no action alternative, there would be no direct impacts to community cohesion in the vicinity of the proposed stockpile areas.

Indirect Impacts

Under the no action alternative, there would be no indirect impacts to community cohesion in the vicinity of the proposed stockpile areas.

Cumulative Impacts

Cumulative indirect impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South project areas, since the proposed sites lie outside the HSDRRS.

Proposed Action

- *All Sites*

Direct Impacts

Impacts on community cohesion are contingent upon the degree to which project construction is expected to encroach upon the physical landscape that directly or indirectly affects the patterns of social interrelationships. In the current analysis, the stockpile areas are close to areas of development such that the spatial element of the community is impinged upon and the shared identity of the community materially threatened. But the adverse impact is not sufficiently large to affect community cohesion. The impact on community cohesion is first demonstrated by identifying a change in the pattern of social interaction, such as diminished contact due to physical separation, impediments to contact, interference in communication, dislocation, or voluntary migration. None of these conditions would be present with the proposed action.

Indirect Impacts

There would be no indirect impacts to community cohesion under the proposed action.

Cumulative Impacts

Storage of borrow material at the proposed stockpile areas would not contribute to cumulative impacts on community cohesion.

Impacts on community cohesion are contingent upon the degree to which project construction is expected to encroach upon the physical landscape that directly or indirectly affects the patterns of social interrelationships. In the current analysis, the stockpile areas are close to areas of development such that the spatial element of the community is impinged upon and the shared identity of the community materially threatened. This is in addition to adverse impacts, such as degraded aesthetic qualities or foregone economic opportunities. The adverse impacts in other resource areas are not sufficiently large to affect community cohesion. The impact on community cohesion is first demonstrated by identifying a change in the pattern of social interaction, such as diminished contact due to physical separation, impediments to contact, interference in communication, dislocation, or voluntary migration. None of these conditions are present with the proposed action.

Construction-related impacts can be distinguished from project-related outputs, that is, the economic and social consequences that are specifically intended from the project design and that make it worthwhile to pursue. An increase in community cohesion can be seen as a specifically intended output from the project, as represented by the HSDRRS. This occurs since storm surge protection measures are designed to protect the community from the catastrophic effects of flooding, preserving the physical integrity of the developed landscape that promotes patterns of social interchange.

Additional cumulative impacts associated with the completion of the HSDRRS in its entirety may occur. The lower flood risk that accrues to 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. This impact is not applicable to the proposed East St. John North and East St. John South stockpile areas, since they lie outside the HSDRRS.

3.4 ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) is institutionally significant because of Executive Order 12898 of 1994 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. The Environmental Protection Agency (EPA) defines EJ as 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.

The methodology to accomplish this includes identifying low-income and minority populations within the HSDRRS project area using up to date economic statistics, aerial photographs, the 2000 U.S. Census, Environmental Systems Research Institute, Inc. (ESRI) estimates, as well as conducting community outreach activities such as small neighborhood focus meetings.

The HSDRR project, of which this IER study area is a subset, is considered the reference community of comparison, whose population is therefore considered the EJ reference population for comparison purposes. A potential disproportionate impact may occur when the percent minority and/or percent low-income 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 1-mile radius of the project footprint are defined as the EJ study area.

The sources for the data used in the analysis include the 2000 U.S. Census and estimates from Environmental Systems Research Institute, Inc. (ESRI). Although the 2000 U.S. Census is ten years old, it serves as a logical baseline of information 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 2008 estimates and 2012 projections provided by ESRI.

Existing Conditions

Parish census figures were used for purposes of this analysis. Areas located within 1-mile of the project footprint are defined as an EJ study area if they are low-income and/or minority communities. Each parish or county is considered the reference community for disproportionate impact analysis. The 2000 census data is utilized as the primary deciding variable per data accuracy and reliability as described above. The 2008 estimates are utilized for reference purposes only. Since the proposed stockpile areas are located in multiple parishes the EJ study areas are described separately as follows.

- *East St. John North*
The proposed East St. John stockpile area is located in Reserve, a small community or populated place located in St. John the Baptist Parish, Louisiana, Block Group 2 of Census Tract 705. According to the 2000 U.S. Census the population in Reserve was approximately 57 percent minority and 21.5 percent low-income. The St. John Parish figures are approximately 50.6 percent minority and 16.7 percent low-income. In the immediate vicinity of the proposed stockpile area there is a large minority and/or low-income population. The East St. John High school is located immediately adjacent to the proposed stockpile site. The percentage of the population that is minority and low-income is significantly higher than state and parish figures. Due to these figures, it is likely the East St. John Stockpile area is an EJ study area as per E.O. 12898.
- *East St. John South*

The proposed East St. John stockpile area is located in Reserve, a small community or populated place located in St. John the Baptist Parish, Louisiana, Block Group 2 of Census Tract 705. According to the 2000 U.S. Census the population in Reserve was approximately 57 percent minority and 21.5 percent low-income. The St. John Parish figures are approximately 50.6 percent minority and 16.7 percent low-income. The percentage of the population that is minority and low-income is significantly higher than state and parish figures. Due to these figures, it is likely the East St. John Stockpile area is an EJ study area as per E.O. 12898.

- *River Road*

The proposed River Road stockpile area is located in New Sarpy, a small community or populated place located in St. Charles Parish, Louisiana, Block Group 1 of Census Tracts 623.01 and 623.02. According to the 2000 U.S. Census the population in New Sarpy was approximately 55.1 percent minority and 19.7 percent low-income. The St. Charles Parish figures are approximately 30.5 percent minority and 11.4 percent low-income. In the immediate vicinity of the proposed borrow area there is a large minority non-low income population. The percentage of the population that is minority is significantly higher than state and parish figures, the percentage of the population that is low-income is comparable to state and parish figures. Due to these figures, it is likely the River Road Stockpile area is an EJ study area as per E.O. 12898.

Discussion of Impacts

No Action

Under the no action alternative, the proposed River Road, East St. John North, and East St. John South stockpile areas would not be used and no minority or low-income populations would be adversely impacted by the proposed project.

Proposed Action

- *East St. John North*

Analyses of the East St. John North stockpile area show that minority and/or low-income communities are within 1-mile of the proposed site. Located next to the open field location is the East St. John High school. With implementation of the proposed action impacts from stockpile site activities such as air quality, noise, traffic, safety, etc. would occur; however, these impacts are usually limited to within 1-mile of the project area and would only occur during the years 2010 through 2012. Additional impacts of the proposed action alternative would be the additive combination of impacts to minority and/or low-income communities by other Federal, state, local, and private efforts. Prior to stockpile placement, a public meeting will be conducted.

- *East St. John South*

Analyses of the proposed East St. John South stockpile area show that minority and/or low-income communities are within 1-mile of the proposed borrow location. With implementation of the proposed action impacts from stockpile site activities such as air quality, noise, traffic, safety, etc. would occur; however, these impacts are usually limited to within 1-mile of the project area and would occur only during the years 2010 through 2012. Additional impacts of the proposed action alternative would be the additive combination of impacts to minority and/or low-income communities by other Federal, state, local, and private efforts. Prior to stockpile placement, a public meeting will be conducted.

- *River Road*
Analyses of the proposed River Road stockpile site show that minority communities are located within 1-mile of the proposed stockpile site location and few identified low-income populations. With implementation of the proposed action impacts from borrow site activities such as air quality, noise, traffic, safety, etc. would occur, but are usually limited to within 1-mile of the project area, and would occur only during the years 2010 through 2012. Additional impacts of the proposed action alternative would be the additive combination of impacts to minority and/or low-income communities by other Federal, state, local, and private efforts. Prior to stockpile placement, a public meeting will be conducted.

A public meeting will be held during the public review and comment period for draft IER #24 near the proposed sites. Community members will have the opportunity to receive information about the proposed action and talk to CEMVN staff members at the meetings.

3.5 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

CEMVN is obligated under Engineer Regulation 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of the proposed action. ER 1165-2-132 states that our HTRW policy is to avoid the use of project funds for HTRW removal and remediation activities, whenever possible. However, costs for necessary special handling or remediation of wastes (e.g., Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.* (RCRA) regulated), pollutants, and other contaminants which are not regulated under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601 *et seq.* (CERCLA) will be treated as project costs if the obligation arises in fulfillment of a validly promulgated Federal, state, or local regulation.

An ASTM E 1527-05 Phase I Environmental Site Assessment (ESA) was completed for each proposed stockpile area. The Phase I ESAs documented any Recognized Environmental Conditions (RECs) for the proposed project areas. Copies of the Phase I ESAs referenced below will be maintained on file at the CEMVN office, and are incorporated herein by reference. Copies of these reports are available by requesting them from the CEMVN, or by accessing them at www.nolaenvironmental.gov.

Phase I HTRW Environmental Site Assessments (ESAs) have been completed for the three proposed stockpile areas:

- A Phase I ESA, entitled "River Road Stockpile Site, Destrehan, St. Charles Parish, Louisiana" was completed on 24 September 2009 by CEMVN personnel. No Recognized Environmental Conditions (RECs) were found. The probability of encountering HTRW on this stockpile site is low, and no further study of HTRW is recommended. If the project location changes the HTRW probability may need to be re-evaluated.
- A Phase I ESA, entitled "Bonnet Carré High Water 2010 Stockpile Site, East St. John North Location, LaPlace, St. John the Baptist Parish, Louisiana" was completed on 20 October 2009 by CEMVN personnel. No RECs were found. The probability of encountering HTRW on this stockpile site is low, and no

further study of HTRW is recommended. If the project location changes the HTRW probability may need to be re-evaluated.

- A Phase I ESA, entitled "Bonnet Carré High Water 2010 Stockpile Site, East St. John South Location, LaPlace, St. John the Baptist Parish, Louisiana" was completed on 21 October 2009 by CEMVN personnel. No RECs were found. The probability of encountering HTRW on this stockpile site is low, and no further study of HTRW is recommended. If the project location changes the HTRW probability 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 projects conducted by government agencies, businesses, or individuals that are within the spatial and temporal boundaries of the actions that are considered in this IER.

As indicated previously, in addition to this IER, the CEMVN is preparing a draft CED that will describe all HSDRRS work completed and the work remaining to be constructed, including borrow sources for the system. 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 Federal and non-Federal actions, projects, and occurrences that may contribute to the cumulative impacts previously discussed as it relates to matters of borrow source excavation. Projects that occur within the greater New Orleans area and southeastern Louisiana were considered collectively (as appropriate) for the evaluation of cumulative impacts. For a more in-depth discussion of cumulative impacts from structural HSDRRS projects (i.e., levee, floodwall, and pumping stations) please refer to IERs #1 through #17, and the CED. IERs #1 and #2 discuss HSDRRS projects within St. Charles Parish. For a more in-depth discussion of cumulative impacts due to HSDRRS borrow area excavation please refer to IER #18, IER #19, IER #22, IER #23, IER #25, IER #26, IER #28, IER #29, IER #30, and IER #32 and the CED.

Cumulative Impacts due to HSDRRS Projects

The proposed action arises from the need to temporarily store borrow material from the Bonnet Carré Spillway for use on HSDRRS projects. The CEMVN has been investigating potential suitable borrow areas for use on the HSDRRS since Hurricane Katrina. Government-furnished and contractor-furnished borrow areas have been approved for use by the CEMVN for HSDRRS and other projects in southeastern Louisiana and southwestern Mississippi. The CEMVN has been working at an accelerated schedule to rehabilitate and complete the HSDRRS system after Hurricanes Katrina and Rita, and has a goal of building the system to authorized levels by June 2011. Over 72,000,000 cubic yards of borrow material is estimated to be needed to complete

authorized levels of protection for the HSDRRS and NOV projects. Borrow material will also be needed to perform levee lifts and maintenance for at least 50 years after construction is completed. The CEMVN is in the process of implementing construction projects to raise the hurricane protection levees associated with the LPV, WBV, and New Orleans to Venice (NOV) projects to authorized elevations. This includes modifications to risk reduction projects covered in IERs #1 through #17. Levee and floodwall improvements throughout the area would require substantial amounts of borrow material, and some of the borrow areas needed have been identified in this document to provide adequate material in proximity to proposed risk reduction projects. Other potential borrow areas were identified and approved for use in IER #18, IER #19, IER #22, IER #23, #25, IER #26, IER #28, IER #29, IER #30, and IER #32 (table 5). Depending on time, cost, and other factors, these and other potential borrow sources not yet identified may or may not be used for HSDRRS construction.

To date, no potential stockpile areas have been approved for HSDRRS use by the CEMVN. The proposed stockpile areas discussed in this IER may be the first three of many proposed stockpile areas. Currently unidentified stockpile areas may incrementally impact the significant resources discussed in this IER in the project area. The use of the proposed River Road, East St. John North, and East St. John South stockpile areas may cumulatively impact the significant resources discussed in this IER in the project area. However, as the East St. John proposed stockpile areas are outside of the HSDRRS, their use likely will not contribute to cumulative impacts to any areas within the HSDRRS.

Cumulative Impacts due to Borrow Needs for Other CEMVN Projects

Multiple current and upcoming CEMVN projects are expected to need suitable borrow material, and perhaps associated stockpile areas other than those proposed in this IER. Major civil works projects that may have a great requirement for borrow material include the Morganza to the Gulf project, Donaldsonville to the Gulf project, Larose to Golden Meadow project, Alexandria to the Gulf project, construction necessary to raise levee heights and incorporate the Plaquemines Parish West Bank non-Federal levees into the NOV project, Grand Isle non-Federal levee construction, and Mississippi River levee maintenance. Additional projects authorized by the Water Resources Development Act (WRDA) of 2007 could also contribute to resource impacts, either adversely or with long-term positive impacts. It is expected that borrow material would be needed for a majority of these projects. However, needed quantities and location of potential borrow areas are not know at this time.

Other CEMVN projects, including most coastal restoration and mitigation projects, should not require “levee grade” borrow material from terrestrial sources.

Cumulative Impacts due to Borrow Needs for Non-Federal Projects

State and local levee and floodwall construction efforts are continuously being repaired, maintained, and upgraded. These include most of the local levee systems found in southeast Louisiana. It is expected that borrow material, and possibly associated stockpile areas, would be needed for a majority of these projects. However, needed quantities and location of potential borrow areas are not know at this time.

4.1 SUMMARY OF CUMULATIVE IMPACTS

The magnitude and significance of cumulative impacts were evaluated in section 3 of this IER by comparing the existing environment with the expected impacts of the proposed action when combined with the impacts of other proximate actions. As stated previously, various Federal, state, and local ongoing and proposed actions may increase the need for

borrow excavation in the study area. Use of the proposed River Road, East St. John North, and East St. John South stockpile areas should not cumulatively impact jurisdictional wetlands, cultural resources, or T&E species and their critical habitat, as the CEMVN is currently avoiding direct or indirect impacts to these resources. All of the impacts to important resources described in this IER due to the proposed action would be temporary, and would not have permanently, cumulatively impacts. The extent of potential cumulative impacts to other resources due to HSDRRS construction are not known at this time, and may be discussed in the CED.

The construction of the proposed borrow stockpile areas would contribute to short-term cumulative effects on transportation. It is anticipated that over 72,000,000 cubic yards of material would be needed to raise levee elevations regionally to meet the needs of the HSDRRS and NOV projects. The total number of truck trips required or haul routes for the movement of this quantity of material is currently unknown, but cumulative short-term impacts to transportation are expected to occur. The CEMVN is currently developing information for an analysis of the transportation impacts associated with the HSDRRS project. A transportation report is being developed and will be released publicly once it is completed. The current estimate for the total number of truckloads necessary to complete the HSDRRS borrow mission is approximately 2,000,000. This estimate was developed as a part of CEMVN's continuing analysis of the potential transportation impacts associated with the HSDRRS mission. Additional information related to transportation impacts is being collected and will be discussed in the CED.

Quantitative cumulative impacts to recreational resources, noise quality, air quality, water quality, and aesthetic resources are not fully known at this time, and will be discussed in the CED. Details on cumulative environmental justice impacts will be analyzed at the conclusion of environmental justice small-group meetings and will be included in the CED.

5. SELECTION RATIONALE

The proposed action consists of utilizing the River Road, East St. John North, and East St. John South sites as stockpile areas. These sites were the only three of eleven potential sites that were investigated in depth by the CEMVN Borrow Team, and which look like viable stockpile areas. There is an identified need for over 31,000,000 cubic yards of borrow material to complete the HSDRRS projects. Because of this need, the CEMVN will continue to investigate all potentially viable stockpile areas for the next few years. Borrow material stored at the River Road, East St. John North, and East St. John South sites may be used to complete the HSDRRS, which would lower the risk of harm to citizens and damage to infrastructure within the system during a storm event.

6. COORDINATION AND CONSULTATION

6.1 PUBLIC INVOLVEMENT

Extensive public involvement has been sought in preparing this IER. The HSDRRS projects, including the proposed stockpile areas 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 the HSDRRS projects 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 27 March and 12 April 2007, after which a 30-day scoping period was open for public comment submission. Additionally,

the CEMVN has been hosting multiple monthly public meetings since March 2007 to keep the stakeholders advised of project status. Public input will be provided in appendix B.

Public meetings related to borrow started in July 2007, and will be continuing until borrow quantities needed are fulfilled and stockpile locations are identified and approved. A public meeting specific to this IER and the proposed stockpile sites will be held in the area. Notice of the meeting and the availability of this IER will be published in area newspapers.

6.2 AGENCY COORDINATION

Preparation of this IER has been coordinated with appropriate Congressional, Federal, state, and local interests, as well as environmental groups and other interested parties. An interagency environmental team was established for HSDRRS projects in which Federal and state agency staff played an integral part in the project planning and alternative analysis phases. Members of this team are listed in appendix C, and correspondence between governmental agencies and the CEMVN will be found in appendix D. 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 proposed IER projects. The following agencies, as well as other interested parties, are receiving copies of this draft IER:

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

LADNR reviewed the proposed action for consistency with the states' Coastal Resource Program. All proposed stockpiling activities discussed in this document were found to be consistent by LADNR (20080392 Coastal Zone Consistency Determination Modification 1; appendix D).

The CEMVN received a draft Coordination Act Report (CAR) from the USFWS on 22 December 2009 (appendix D). Recommendations of the USFWS, in accordance with the Fish and Wildlife Coordination Act, include:

- 1) USFWS Recommendation: The protocol to identify and prioritize borrow sources provided in our August 7, 2006, Planning-Aid letter should be utilized as a guide for locating future borrow sites, or expanding existing sites to reduce the need for more stockpile areas.

CEMVN Response: Concur.

- 2) Any proposed change in stockpile site features, locations or plans shall be coordinated in advance with the [USFWS], NMFS, LDWF, and LDNR.

CEMVN Response: Concur.

- 3) If a proposed stockpile site is changed significantly or it is not used within one year, we recommend that the [CEMVN] reinitiate coordination with [the USFWS] to ensure that the proposed project would not adversely affect any federally listed threatened or endangered species or their habitat.

CEMVN Response: Concur.

7. MITIGATION

Compensatory 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.

All potential stockpile areas described in this IER were assessed by the USFWS and the CEMVN under NEPA, the Fish and Wildlife Coordination Act, and under Section 906(b) WRDA 1986 requirements. It has been determined that use of the proposed River Road, East St. John North, and East St. John South stockpile areas would not directly impact jurisdictional wetlands or non-jurisdictional BLH, and therefore no mitigation for this resource is necessary.

Table 5. HSDRRS Impacts and Compensatory Mitigation to be Completed

IER	Parish		Non-wet		Non-wet BLH		BLH		Swamp		Swamp		Marsh		Water Bottoms	
			acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs	acres	AAHUs		
1 LPV, La Branch Wetlands Levee	St. Charles	Protected Side	-	-	-	-	-	-	73.23	39.53	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	38.48	29.73	-	-	-	-	-	-
1 Supplemental LPV, La Branch Wetlands Levee	St. Charles	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 LPV, West Return Floodwall	St. Charles, Jefferson	Protected Side	-	-	-	-	-	-	-	-	-	17.00	9.00	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	17.00	9.00	-	-	-
3 LPV, Jefferson Lakefront Levee	Jefferson	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	26.40
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 LPV, Orleans Lakefront Levee	Orleans	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 LPV, Lakefront Pump Stations	Jefferson, Orleans	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	3.29
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 LPV, Citrus Lands Levee	Orleans	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90
		Flood Side	-	-	-	-	-	-	-	-	-	4.00	-	-	-	-
6 Supplemental LPV, Citrus Lands Levee	Orleans	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 LPV, Lakefront Levee	Orleans	Protected Side	-	-	151.70	79.30	-	-	-	-	-	100.40	36.80	-	-	106.00
		Flood Side	-	-	30.00	11.90	-	-	-	-	-	70.00	37.20	-	-	-
8 LPV, Bayou Dupre Control Structure	St. Bernard	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30
		Flood Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 LPV, Chalmette Loop	St. Bernard	Protected Side	-	-	38.32	16.44	-	-	-	-	-	106.55	57.31	-	-	95.00
		Flood Side	-	-	35.31	15.22	-	-	-	-	-	323.04	209.94	-	-	-
11 Tier 2 Borgne IHNC	Orleans, St. Bernard	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	15.00	2.59	-	-	-	-	-	122.00	24.33	-	-	-
12 GIWW, Harvey, Algiers	Jefferson, Orleans, Plaquemines	Protected Side	-	-	251.70	177.3	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	2.30	1.90	-	-	-	-	74.90	38.50	-	-	-	-
14 WBV, Westwego to Harvey Levee	Jefferson	Protected Side	-	-	45.00	30.00	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	45.50	18.58	-	-	-	-	29.75	17.02	-	-	-	-
15 WBV, Lake Cataouatche Levee	Jefferson	Protected Side	-	-	23.50	6.13	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	3.60	1.35	-	-	-	-	-	-	-	-	-	-
16 WBV, Western Tie-in	Jefferson, St. Charles	Protected Side	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	137.80	66.30	-	-	-

IER	Parish		Non-wet <i>acres</i>	Non-wet BLH <i>AAHUs</i>	BLH <i>acres</i>	BLH <i>AAHUs</i>	Swamp <i>acres</i>	Swamp <i>AAHUs</i>	Marsh <i>acres</i>	Marsh <i>AAHUs</i>	Water Bottoms	
											<i>acres</i>	<i>acres</i>
17 Company Canal Floodwall	Jefferson	Protected Side	-	-	5.50	2.69	-	-	-	-	-	-
		Flood Side	-	-	-	-	19.00	17.09	-	-	-	-
18 GFBM	Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles	Protected Side	379.30	152.32	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
19 CFBM	Hancock County, MS; Iberville, Jefferson, Orleans, Plaquemines, St. Bernard	Protected Side	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
22 GFBM	Jefferson, Plaquemines	Protected Side	244.69	118.54	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
23 CFBM	Hancock County, MS; Plaquemines, St. Bernard, St. Charles	Protected Side	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
25 GFBM	Jefferson, Orleans, Plaquemines	Protected Side	933.00	284.00	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
26 CFBM	Jefferson, Plaquemines, St. John the Baptist; Hancock County, MS	Protected Side	-	-	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
28 GFBM	Jefferson, Plaquemines, St. Bernard	Protected Side	19.94	8.45	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
29 CFBM	Orleans, St. Tammany, St. John the Baptist	Protected Side	107.30	48.60	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
30 CFBM	St. Bernard and St. James; Hancock, MS	Protected Side	225.00	189.40	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
32 CFBM	Ascension, Orleans, Plaquemines, St. Charles	Protected Side	202.1	97.43	-	-	-	-	-	-	-	-
		Flood Side	-	-	-	-	-	-	-	-	-	-
Totals		Protected Side	2111.33	898.74	515.72	311.89	73.23	39.53	223.95	103.11	00.00	
		Flood Side	-	-	131.71	51.54	162.13	102.34	673.84	346.77	230.99	
		Both	2111.33	898.74	647.43	363.43	235.36	141.87	897.79	449.88	230.99	

- Not applicable to the IER or number impacted is 0

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

Table 5 shows the cumulative impacts of all IERs which have been completed as of the date of publication. Further information on mitigation efforts will be available in forthcoming IERs.

8. COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Use of the proposed River Road, East St. John North, and East St. John South stockpile areas could 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 National Marine Fisheries Service confirmation that the proposed action would not adversely affect any T&E species or completion of Endangered Species Act Section 7 consultation (USFWS letters dated each 22 January 2010; appendix D); Louisiana Department of Natural Resources (LDNR) concurrence with the determination that the proposed action is consistent, to the maximum extent practicable, with the Louisiana and Mississippi Coastal Use Programs (LDNR letter 09 February 2010; appendix D); coordination with the SHPO (letter dated 11 December 2009); receipt and acceptance or resolution of all Fish and Wildlife Coordination Act recommendations; and receipt and acceptance or resolution of all LADEQ comments on the air quality impact analysis documented in the IER. The USFWS has determined that no T&E species or their critical habitat would be adversely affected by the proposed action. The SHPO has determined that cultural resources would not be adversely impacted by the proposed action.

9. CONCLUSIONS

9.1 INTERIM DECISION

The proposed action consists of approving the River Road, East St. John North, and East St. John South sites for use as stockpile areas. This office has assessed the environmental impacts of the proposed action on jurisdictional wetlands, non-jurisdictional BLH, non-wetland/upland resources, wildlife, T&E species, cultural resources, recreational resources, noise quality, air quality, water quality, aesthetic resources, farmland, and socioeconomic resources. The proposed action would have no significant effect on jurisdictional wetlands, non-jurisdictional BLH, cultural resources, or T&E species and their critical habitat. Any found RECs would be avoided. The interim decision is to approve the River Road, East St. John North, and East St. John South sites as potential stockpile areas for use in the construction of the HSDRRS.

9.2 PREPARED BY

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APPENDIX A: LIST OF ACRONYMS AND DEFINITIONS OF COMMON TERMS

AAHU	Average Annualized Habitat Unit
APE	Area of potential impact
ASTM	American Society of Testing and Materials
BLH	Bottomland Hardwood (Forest)
BMP	Best Management Practice
CAR	Coordination Act Report
CED	Comprehensive Environmental Document
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Clay	CH: Fat clay
Classifications	CL: lean clay ML: Silt
dba	Decibel
DNL	Day-night average sound level
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice
USEPA	U.S. Environmental Protection Agency
ER	Engineering Regulation
ESA	Environmental Site Assessment
ESRI	Environmental Systems Research Institute
FONSI	Finding of No Significant Impact
GIWW	Gulf Intracoastal Waterway
HSDRRS	Hurricane and Storm Damage Reduction System (formerly known as the Hurricane Protection System)
HPS	Hurricane Protection System (see HSDRRS)
HTRW	Hazardous, Toxic, and Radioactive Waste
HU	Habitat Unit
IER	Individual Environmental Report
IERS	Individual Environmental Report Supplemental
IPET	Interagency Performance Evaluation Team
LCA	Louisiana Coastal Area
LACRP	Louisiana Coastal Resource Program
LADEQ	Louisiana Department of Environmental Quality
LADNR	Louisiana Department of Natural Resources
LPV	Lake Pontchartrain and Vicinity Project
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NO _x	Nitrogen oxides
NOV	New Orleans to Venice Project
O ₃	Ozone
Pb	Lead
PDT	Project Delivery Team
PI	Plasticity index
PM	Particulate matter

PPM	Parts per million
P.L.	Public Law
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
ROD	Record of Decision
ROE	Right of Entry
Section 404 (of the Clean Water Act)	The Section 404 program for the evaluation of permits for the discharge of dredged or fill material was originally enacted as part of the Federal Water Pollution Amendments of 1972. The Secretary of Army acting through the Chief of Engineers may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.
SHPO	State Historic Preservation Officer
SIR	Supplemental Information Report
SPH	Standard Project Hurricane
SO _x	Sulfur oxides
T&E	Threatened or Endangered Species
USACE	U.S. Army Corps of Engineers CEMVN: Mississippi Valley Division, New Orleans District
USDA	U.S. Department of Agriculture NRCS: Natural Resources Conservation Service
USFWS	U.S. Fish and Wildlife Service
WBV	West Bank and Vicinity Project
WRDA	Water Resources Development Act

APPENDIX B: PUBLIC COMMENT AND RESPONSES SUMMARY

Public comments received during the public review and comment period will be released with the Final IER.

APPENDIX C: MEMBERS OF INTERAGENCY ENVIRONMENTAL TEAM

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

APPENDIX D: INTERAGENCY CORRESPONDENCE

Agency correspondence received during the public review and comment period will be released with the Final IER.